Resilience in Canadian Indigenous Youth: A Scoping Review

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Abstract:

Introduction: Contemporary definitions of resilience generally include personal, family, and community characteristics that contribute to individuals' abilities to thrive in the face of adversity. However, these definitions are derived largely from research involving non-Indigenous youth and may fail to incorporate unique characteristics from Indigenous perspectives. Understanding resilience in Indigenous youth by summarizing existing literature is an important next step in applied resilience-based research and intervention.

Methods: A scoping review of 33 published and grey literature sources on resilience in Canadian Indigenous youth was completed.

Results: Resilience among Indigenous youth included engagement in culture, having positive peer and family relationships, and having a positive self-identity, congruent with research involving non-Indigenous youth. Despite such similarities, unique factors to Indigenous youth were related to community-based resilience including autonomy and access, as well as support and connectedness.

Conclusion: Resilience is an important concept that can foster strength and support pathways to perseverance in Indigenous youth. Incorporating Indigenous models in applied resilience-based research and intervention should include relational approaches of measurement and collaborative research methods that engage Indigenous young people and their communities.

Conflicts of Interest:

We have no conflicts of interest to declare.

Introduction

Indigenous youth in Canada experience increased adversity when compared to non-Indigenous youth (Reading & Wein, 2009). Indigenous youth are more likely to experience poorer health and wellbeing than non-Indigenous youth, which is demonstrated in higher rates of unstable housing (Status Report of the Auditor General of Canada, 2011), chronic illness such as diabetes (Smylie & Adomako, 2009), substance use (Elton-Marshall, Leatherdale, Burkhalter, & Brown, 2013), lower food security (Rudolph & McLachlan, 2013), and have an increased risk of experiencing sexual violence (Canadian Council, 2010). Research has aimed to identify components that assist in avoiding detrimental effects when such experiences are encountered (Ungar, 2013). The study of resilience can promote wellbeing within potentially vulnerable populations by identifying factors that increase the ability of an individual to successfully adapt in the face of adversity (Ungar, 2013).

Indigenous populations (in this paper, referring to First Nations, Inuit, and Métis peoples in Canada) indicate that identifying factors that promote resilience, and ultimately wellbeing, is a priority within communities (Dumont-Smith, 2005). Understanding Indigenous resilience is limited as much of the existing research neglects the unique cultural factors such as connection to the community, continuation of cultural identity, and historical language that influence a holistic model of resilience for these communities (Kirmayer, et al., 2011). The majority of resilience research is completed with non-Indigenous communities and does not incorporate specific adverse factors endured by Indigenous populations (Hu, Zhang, & Wang, 2015). For example, Indigenous people have experienced long-standing historical trauma associated with systematic colonization, marginalization, and discrimination by non-Indigenous mainstream society (The Truth and Reconciliation Commission [TRC], 2015). Thus, it is possible that factors, which contribute to Indigenous resilience, differ from non-Indigenous communities because of these historical traumas and holistic models of wellbeing.

The implementation of the residential school system in Canada, and the prioritization of colonizing practices within such institutions, have created residual effects that have proliferated throughout generations of Indigenous peoples. These adverse effects are commonly referred to as intergenerational trauma (TRC, 2015). Suppressing Indigenous cultural practices such as language, traditional teachings, and expression of spirituality, remain evident today (TRC, 2015) through a widespread loss of language and disruption of positive cultural identity (McIvor et al., 2009). Intergenerational trauma is associated with lower ratings of physical and mental health, increased risk for distress, and increased suicidal behaviours (Hackett, Feeny, & Tompa, 2016). This trauma is related to the high prevalence of other negative life experiences such as homelessness (Oelke, Thurston, & Turner, 2016), lower educational attainment (First Nations Regional Longitudinal Health Survey, 2005), and increased substance use (Ross et al., 2015). Intergenerational trauma has not been experienced universally among all Indigenous populations (TRC, 2015). Some people and communities have been protected from the detrimental outcomes more than others (Kirmayer Brass, & Tait, 2000). Indigenous communities within Canada have diverse cultural and spiritual practices, as well as unique histories of trauma and subsequent effects.

Given the unique risk factors experienced by Indigenous people in Canada, protective factors, and outcomes of resilience, must be reviewed considering the characteristics of this population (Brokenleg, 2012). Documentation of global experiences of resilience has indicated the importance of such a contextualization (Fleming & Ledogar, 2008; Ungar, 2013; Walls, Whitbeck, & Armenta, 2016). Although resilience factors can be similar among cultures, complex relationships exist between relevant stressors and resilience outcomes, modifying the effects of these factors within specific populations. Failure to incorporate such factors such can drastically change conclusions (Walls et al., 2016). What could be a protective factor in one instance could be a risk factor within another (Fleming & Ledogar, 2008). Culturally specific indicators of resilience have been observed and measured in relation to other populations such as commitment to culture, use of traditional language and practices, and connection to spirituality (Snowshoe et al., 2015). Consideration of dynamic resilience outcomes associated with diverse populations, including how outcomes are modified within the context of various cultural experiences, promotes positive health outcomes (Rutter, 2012; Ungar, 2013).

Models of Indigenous resilience emphasize traditional conceptualizations of health as holistic models of wellbeing. Rather than focusing on the absence of illness, the examination of Indigenous wellbeing provides strength-based measurement of individual, family, and community wellness (Assembly of First Nations & Health Canada, 2015). Indigenous models of resilience have aimed to incorporate Indigenous worldviews and "ways of knowing" that account for how individuals perceive, engage, interpret, and contextualize themselves and their relationships (McGuire-Kishebakabaykwe, 2010). The identification of protective factors, defined as specific components contributing to positive outcomes and adaptation, regardless of exposure to adversity, is a priority within a holistic wellness framework.

Promoting resilience within Indigenous youth has been prioritized by many communities as a way to promote overall Indigenous wellbeing over the lifespan. The

existence of unique cultural factors may mitigate the effects of adversity within Indigenous youth and promote wellbeing (MacDonald, Ford, Willox, & Ross, 2013; Ungar, 2013). Documenting and understanding these features can foster resilience within a potentially vulnerable population, ultimately promoting the health and wellbeing of Indigenous young people, and can also inform interventions for the general population. The objectives of this study were to explore existing literature pertinent to Indigenous youth that 1) defined resilience and how it was measured, 2) identified outcomes related to resilience and 3) reviewed protective factors that promoted resilience.

Method

Data Sources

A systematic search of published grey and peer-reviewed published literature was completed between September 1, 2015 and November 15, 2016. Reference reviews of obtained sources were also used to find additional literature. The databases used in the study can be found in Table 1. The search terms included: Aboriginal, First Nation*, Indigenous, Indian, Métis, Native, Inuit, and Resilien*.

Study Selection

To be included in this review, studies were related to Indigenous youth resilience in Canada. Articles published after 1980 were considered. The included studies referred

Table 1: Databases and search terms used to identify studies

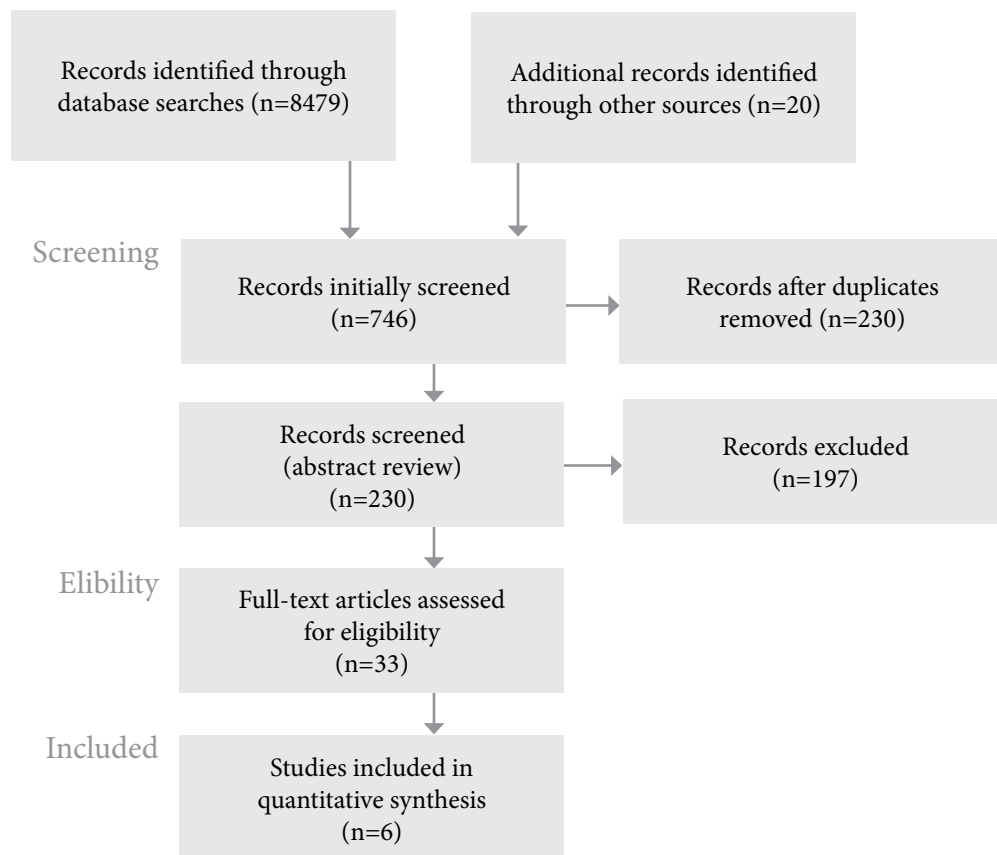| Databases	Grey Literature
Academic Search Premier	National Native Alcohol and Drug Abuse Program
Australian Indigenous HealthInfoNet	National Native Addiction Partnership Foundation
Bibliography of Native North Americans	Youth Solvent Abuse Program
CINAHL	National Native Mental Health Association
Cochrane Library	Assembly of First Nations
ERIC	National Aboriginal Health Organization
Health Canada-First Nations and Inuit Health	Thunderbird Partnership Foundation
Indigenous Studies Portal	Royal Commission on Aboriginal People
Manitoba Aboriginal and Northern Affairs	Aboriginal Healing Foundation
MEDLINE	National Collaborating Centre on Aboriginal Health
National Aboriginal Health Organization (NAHO)	Centre for Aboriginal Health Research
National Indian and Inuit Community Health Representative Organization (NIICHRO)	Chiefs of Ontario
Native Health Database	Métis Nation
ProQuest Dissertation and Thesis Database	Inuit Tapiriit Kanatami
PsychARTICLES	
PsychINFO	
Public Health Department of the Cree Health Board	
ScienceDirect	
Social Sciences Citation Index	
US Department of Health and Human Services- Indian Health Services	
Web of Science	

specifically to the connection of resilience in youth with either protective factors or related outcomes. Studies were excluded if they did not provide outcomes or protective factors related to resilience, if the target population was not youth (defined broadly between the ages of 12 to 30), or if the literature was not available in English. An initial search identified 230 potential sources (see Figure 1). Upon further review, 126 of those sources were excluded due to irrelevance. Of the 104 remaining sources, 71 of those were excluded due to not including Canadian youth. Of these international articles, there were 48 with relevant subject material; 52% of these (n= 25) examined US Indigenous samples, 40% (n = 19) looked at Australian samples, and 8% (n = 4) reviewed other countries (New Zealand, Norway, and Peru). The final review included 33 Canadian sources that met all study selection criteria, with 24 of these providing at least one outcome relating to youth resilience.

Data Extraction

The location, age, and Indigenous identity of participants were extracted when studies were reviewed. Additional data (Table 2) were extracted from studies and included methods,

Figure 1: PRISMA Diagram

Identification

| Records identified through database searches (n=8479) | Additional records identified through other sources (n=20) |

Screening

| Records initially screened (n=746) | → | Records after duplicates removed (n=230) |

| Records screened (abstract review) (n=230) | → | Records excluded (n=197) |

Elibility

| Full-text articles assessed for eligibility (n=33) |

Included

| Studies included in quantitative synthesis (n=6) |

definitions of resilience, and key findings related to either outcomes related to resilience or protective factors associated with promoting resilience. Comparisons between studies are made with caution as the reviewed studies assessed a wide array of Indigenous populations in Canada. These studies represented distinct populations and therefore, results were not necessarily uniform across these groups.

Results

See Table 2 (on following page).

Study Methods

The methods used by the included studies were quantitative (n= 6), qualitative (n= 13), mixed-methods (i.e., including both a quantitative and qualitative component; n=9), literature reviews/theoretical papers (n= 5), and program description (n = 1). Interviews and focus groups were the primary sources of qualitative data, and were chosen by researchers to provide a holistic and collaborative understanding of resilience in Indigenous communities. One study, reported the use of relational Indigenous epistemology, an Indigenous research method, as a framework for study design (Saskamoose et al., 2016).

The majority of studies (n= 12) used a community-based participatory research approach. Common steps within this approach included being supervised by a research advisory committee, having the community generate research questions, engaging with Indigenous stakeholders throughout the project, and obtaining community permission before engaging in research activities. Thus, measures were taken to ensure the results were valid and accurate according to community members' knowledge.

Six studies reported using a strength-based approach within their study design. Within these studies, the role of the strength-based approach differed, ranging from guiding the entire understanding of resilience (Dell et al., 2011), to simply identifying strengths by youth (Brooks et al., 2015). Strength-based frameworks were used within the literature to promote youth empowerment, build capacity, foster leadership skills, and increase collaboration. Dell and colleagues (2011) compared elements of a strength-based approach to positive psychology with values of Anishinabe culture and found similar elements contributing to quality of life. These elements included connection (i.e., spirituality, perseverance, hope, and wisdom), self-efficacy (i.e., future mindedness, and responsibility) and living a meaningful life (i.e., courage, and creativity; Dell et al., 2011).

Assessing resilience. Most studies engaged in qualitative data analysis, and included methods such as semi-structured interviews, focus groups, ethnographic methods, and arts-based methods, among others (see Table 2 for the specific methods used by studies). The questionnaires and qualitative research methods were primarily designed by the researchers and reflected a desire to capture rich, in-depth, lived experiences and values. Among the five quantitative studies, two (Ungar at al., 2008; Zahradnik et al., 2010) used the Child and Youth Resilience Measure (CYRM; Ungar et al, 2008), and two used the Cultural Connectedness Scale (Showshoe et al., 2015; Snowshoe et al., 2016), to measure outcomes related to youth resilience.

Table 2: Data Synthesis

Source	Indigenous Population & Other Characteristics	Age (years)	n	Method	Definition of Resilience	Key Findings
Ames et al. (2015)	Aboriginal Off-reserve	12-23	283	Quantitative Investigated if self-esteem & optimism moderated depressive symptoms & alcohol use	Not specified	Participants that reported high levels of optimism and self-esteem scored lower on depression, even when controlling for gender and alcohol risk. A correlation between heavy drinking and depression was not seen after including protective factors, suggesting a mediating effect from these factors. However, self-esteem was not significant & optimism could not be analyzed, but the authors suggest they might work together as mediators.
Andersson, et al. (2008)	Aboriginal	n/a	11 studies	Literature review	Provides a reference for an evolving framework of what resilience is, but note that resilience can be measured in relation to risk factors, social pressure, and opportunities.	There were associations between resilience and personal assets, and social resources. Personal assets included mastery, self-esteem, low distress, and pride in one's heritage are considered to be features of resilience in Aboriginal youth. Knowledge of adverse consequences was not associated with resilience. There was an association between church attendance and not smoking but church attendance was not protective of other risks.
Blackstock & Trocmé (2005)	Aboriginal	n/a	n/a	Literature review	Contends that child, family, and community resilience are interdependent	Stronger, more resilient, children come from strong communities, and interventions need to focus attention toward reducing community based risk factors to improve resilience for Indigenous youth.
Brokenleg (2012)	Not available	n/a	n/a	Theoretical	Closely intertwined with trauma. "The capacity for adapting successfully and functioning competently, despite experiencing chronic stress or adversity following exposure to prolonged or severe trauma" (p. 9)	Resilience allowed people to live life well and it comes from being able to get back up when life knocks you down. "Resiliency is being strong on the inside, having a courageous spirit." (p. 12) Youth are resilient when they develop a sense of belonging, mastery, independence, and generosity.
Brooks et al. (2015)	First Nations Saskatchewan Male Not in School	12-16	Quantitative: 332 Qualitative: 49	Mixed methods Community based participatory research Arts based Interviews Quantitative surveys	"Resilience is not just an individual's capacity to cope with adversity, but a community's capacity to extend resources to sustain well-being and provide these resources in culturally relevant ways " (p. 707)	Family, culture, and programming influence resilience, but also youth's own definition of resilience can influence results.

		Age	n			Description of proram, none reported.
Caldwell & Maloney (2008)	Aboriginal	n/a	n/a	Qualitative Interview	None provided	Description of proram, none reported.
Dell, Dell, & Hopkins (2005)	First Nation; On-reserve; Residential inhalant abuse treatment centre	12-26	Not specified	Mixed	"Resiliency is viewed here in a holistic way, consisting of a balance between the ability to cope with stress and adversity (recognizing the consequent creation of a skill set of positive coping strategies) and the availability of community support." (p. 5) Resiliency is a shield to protect against any future drug use, as inhalant use is associated with increased rates of future drug use.	Resiliency was a holistic concept intended to strengthen youths' spirit as part of a residential substance-use treatment. The community was important to maintain gains and provided the youth with resilience when re-entering the community after treatment. Outcomes were related to abstinence from substances, with 82% of clients remaining abstinent after 6 months of treatment.
Dell & Hopkins (2011)	Aboriginal; Volatile substance users in residential treatment	<18	154	Mixed; Program evaluation of residential treatment with cultural emphasis	Defined resilience as an individual ability to overcome difficulties as well as the availability of community resources.	Almost half of the youth attending the program reported remaining abstinent 90 days after leaving and the majority returned to school.
Fanian et al (2015)	Tłı̨chǫ (First Nations)	13-20	4 Youth 5 Facilitators	Mixed Method: Questionnaires Focus groups Field notes Reflective practice notes Debriefing sessions	"Resilience can be understood as "both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being, and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways" (p. 2)	Involvement in the program was reported by youth to increase their confidence and skills. The youth reported that the activities were engaging, culturally relevant, and could be used to spread their messages throughout the community.
Filbert & Flynn (2010)	First Nations; Living in out of home care	10-17	97	Quantitative	Successful outcomes or adaptation despite serious threats to development (p. 560).	Higher scores in youth's prosocial behavior, self-esteem educational performance, and behavioral difficulties (i.e., proxies of resilience) were associated with greater developmental assets.
Government of Canada (2005a)	First Nations; Living on reserve; Inuit; Living in an Inuit community	10-30	n/a	Review	A capability of individuals that develops over time, helps in successfully coping with significant adversity or risk, contributes to overall health, and is enhanced with protective community and individual factors.	Provided recommendations to reduce suicide rates in Indigenous communities. Suggested that attention be placed on strengthening protective factors such as family connectedness, informal support networks, community cohesiveness, problem-solving skills, and a sense of personal autonomy. Adequate parenting support, including information on how to recognize suicidal behaviours or thoughts should be provided. Furthermore, structural issues of power impacts the resiliency of individuals (e.g. unresolved land claims, poverty and substandard infrastructure) need to be considered.

Study	Population		N	Method	Definition of resilience	Findings
Hackett et al. (2016)	Inuit Suicidal youth	n/a	n/a	Program description	No specific definition defined. Aimed to build resilience through: "(1) enhanc[ing] the mental, physical, and spiritual health of a group of "at-risk' youth; (2) build[ing] social connections between the youth and other community members; and (3) transmit[ing] environmental knowledge, skills, and values from experienced harvesters (i.e., Inuit mentors skilled in the areas of hunting, harvesting, navigation, and traditional knowledge) to youth." (p. 64)	No male school-aged suicides since April 2012. Reduction in clinic visits because of suicide attempts.
Hansen & Antsanen (2016)	Northern Manitoba Cree (First Nations)	Elders	5	Qualitative Ethnographic methods	Resilience was discussed as being a process that is acquired and developed by anyone. It is demonstrated when people are able to be flexible, have a vision for how to succeed, and when they flourish in the face of adversity. Resilience is embedded in the land and related to land-based practices.	Elders communicated that traditional educational practices fostered resilience through gentle and experiential methods, connected to the land, transmitted through family and community members, learning traditional languages, and communicating that wellbeing is a balance between the mind, emotions, physical health, and spirituality. The Elders suggested contemporary education can promote resilience through traditional teachings, culture, community members, first languages, spirituality and fostering a positive Indigenous identity. By also demonstrating respect for "the land, the self, the people, and the spiritual world" (p. 14)
Hopkins (2012)	Tłicho (First Nations) High school graduates	Not specified	11	Qualitative Social phenomenology	Healthy resistance, autonomy and nonconformity. The continual construction and development of identity.	Resilience was demonstrated in regard to high school achievement and ability, but this resilience was not seen across time or situations. Three diverse, complex, and dynamic patterns of educational attainment resiliency were found in this study. The authors found many themes relating to educational resilience including: connections to ancestors, cultural sources/ learning, social referencing, perceptions of intellect, self-regulation, social world vigilance, reflective decision making process, citizenship, coping strategies (personally developed), self-advocacy.

Hudson (2016a)	Youth accessing a community program for Indigenous people	18-25	5-9 (varied daily)	Qualitative Arts based methods	Provided multiple definitions of resilience. Included the idea that resilience is the process of overcoming adversity to reach positive adaptation. Also included a connection to community, sense of identity of self and community through time, accessing personal and community strengths, and having insight into oneself and spirituality.	Throughout the project youth demonstrated their resilience by communicating holism and flexibility. They also demonstrated having interpersonal confidence and improved sense of self, although this was sometimes related to developing a dichotomous sense of self as an Indigenous individual as well as an urban young person. Youth also demonstrated a perseverance to succeed and a sense of personal power and influence over the future. Important to resilience was retaining distinctiveness, connection to ceremony, social advocacy, seeking the truth about culture, and having tenacity.
Kral et al. (2014)	Inuit	12-19	23	Qualitative Modified grounded theory	"Resilience is viewed less as an individual trait but rather through the social context as a process. Inuit see resilience as hope or niriunniq, and in the community of Igloolik also as tunngajuk or "having one's feet on the ground," being grounded, or having a foundation on which to live". (p.675) The authors also noted coping, going through a tough time that will pass; experience or healing, and being a strong person, either physically or spiritually as important cultural aspects for resilience.	Stressors were considered to be: bullying, substance abuse, school, domestic violence, romance. Talking to people (friends, family) and engaging in cultural activities (hunting, camping, and fishing) promoted resiliency.
Lafferty (2012)	Aboriginal	Grade 1-12	724 youth enrolled in the program	Mixed Program description Case presentations Initial outcome indicators Parent feedback	""Do Edàezhe" is a Dogrib expression describing a person who is capable, skillful, and knowledgeable: a person, who has the skills needed to survive in the world in the traditional Dene sense". (direct quote p. 217)	Involvement with the program was related to an overall improvement in attendance, decreases in the number of office referrals, and an increase in academic performance. (p. 226) Parent feedback identified a broad range of improvements in youth including more positive views of the self (i.e., increased self-esteem) and being more involved in activities.

Author (year)	Population/Setting	Age	N	Methodology	Definition of resilience	Findings
Lalonde (2006)	Aboriginal On-reserve	12-18	Nearly 600	Mixed	Defined resilience as a process, and not specific attributes of a child, involving interactions with the environment, neighbourhoods, community, and family.	Indicators of cultural continuity account for increased levels of risk for suicide despite socioeconomic and community risk factors. This is attributed to a greater sense of personal persistence through time that is experienced by individuals in communities without cultural continuity. Individual resilience was related to community resilience.
Leibenberg et al. (2015)	Indigenous Remote community	$M = 15.42$ $SD = 1.81$	228	Mixed Case study	Reiterated the definition from Ungar et al. (2008), reflecting resilience as a transactional process between individuals and their community, the community's access to and allocation of resources, a holistic understanding of support, connections to ancestors, land, and language, and resilience being locally derived.	Speaking Inuttitut was associated with higher contextual resource scores, especially spiritual questions. Having a sense of responsibility, respect, and being able to listen contributed to a sense of identity, as well as control and power over one's life. The case study document resilience stemming from providing care, reciprocal teamwork, trust, support from others, sharing, patience, intergenerational connectedness, and a feeling of agency.
Oliver & LeBlanc (2015)	Indigenous and non-Indigenous homeless women Toronto	15-21	8	Qualitative Multiple case studies Life history interviews	Relied on Ungar's (2007) definition of resilience: "[R]esilience is the outcome from negotiations between individuals and their environments, to maintain a self-definition as healthy" (p. 87).	Women were able to maintain resilience their interactions with the community. They demonstrated resistance to colonialism and Eurocentric ways of knowing, as well as self-determination and resistance in their Aboriginal identities by reclaiming, owning, and practicing cultural traditions. The women also maintained involvement with potential sources for success despite chaos and found support through greater social networks as family (e.g., grandmothers, aunts, uncles, community members). Maintaining self-esteem, cultural identity, and a sense of belonging was also important.

Author	Population	Age	N	Method	Resilience definition	Findings
Pearce et al. (2015)	Indigenous Vancouver, Prince George, and Chase, British Columbia Illicit drug users	14-30	191	Quantative	Resilience was defined as a personal characteristic of being able to positively adapt despite adversity, as well as cultural resilience, which is language, culture, and spirituality, buffering against adversity.	Greater resilience scores on the Connor-Davidson Resilience Scale were seen among youth who were never in foster care, as well as those who graduated high school. Low to moderate or severe emotional neglect was associated with lower resilience scores, as were experiencing sexual abuse, daily crack use, and blackout drinking. Higher resilience scores were also associated with greater endorsement of having a family that often or always lived by traditional ways, family speaking traditional languages, youth speaking traditional languages, living traditionally for the last six months, and accessing drug and alcohol treatment.
Petrasek et al. (2015)	Inuit Nunatsiavut	15-25	17	Qualitative Semi structured interviews Constant comparative method Explored mental health and well-being in relation to climate change Positive approach	Relied on examples: belief in self, positive role models, cultural traditions and practices	Five themes of mental health & well-being were identified: 1) being on the land 2) connecting to Inuit culture, 3) strong communities, 4) relationships with family and friends and 5) staying busy Challenges to resilience were: restricted travel, access to the land, threats to traditional ways and worry due to climate change.
Riecken (2006)	First Nations University Students	Secondary High School Students	28 videos 29 interviews	Qualitative Community based participation research	The ability to overcome adversity. (p. 10) "Resiliency is an approach that expands our thinking about students, schools, and communities beyond problem identification and resolution to strengths identification and actualization." (p.10)	Participant relationships with communities were improved, across generations, and within a diverse group of community members. Participants improved sense of culture, and self.

Author	Population	Age	N	Methodology	Definition of resilience	Findings
Ritchie et al. (2014)	First Nations	12-18	59	Mixed Concurrent embedded strategy Longitudinal	relationships; nurturance and support; purposes "Six key elements of resilience identified by Henry and Milstein (2004) are positive connections and expectations; clear, consistent and appropriate boundaries; life-guiding skills; and meaningful participation." (p.10)	Resilience was increased between the first day of the program & one month later for youth (resilience scores reverted back to similar level after a year). Changes in family and living situation were the most commonly noted factors affecting resilience. Although, recent fatalities, life stressors, and bad influences leading to bad decisions also affected resilience. Community and school programs had a positive influence on resilience.
Sam et al. (2015)	Indigenous Attending a secondary school in British Columbia	14-17	136	Quantitative	Resilience is a person's ability to overcome adverse events. (p. 240)	A secure attachment pattern was associated with higher levels of attachment in comparison to insecure attachment pattern. The insecure attachment patterns were associated with lower resilience scores Preoccupied attachment associated with lowest mean resilience scores, second was dismissing attachment, and fearful attachment after controlling for gender, socioeconomic status, and age. Preoccupied attachment was associated with the lowest mean resilience scores, second was dismissing attachment, and third lowest resilience scores were associated with fearful attachment.

Study	Population	Age	N	Methods	Resilience definition	Findings
Saskamoose et al. (2016)	First Nation & Metis; Attending an Indigenous youth health & wellness program	14-17	13	Qualitative; Relational Indigenous epistemology; Participatory action research	Resilience was defined as the ability of an individual to navigate to resources, positively adapt despite adversity, as well as the environment's ability to provide necessary resources. Resilience was also conceptualized as being related to cultural connectedness, community, family, and cultural values, as well as efforts to revitalize language, spirituality, and culture.	Youth viewed their connection to culture, relationships with elders & role models, navigating addictions, and engaging in nuerodecolonizing activities (e.g. yoga & sports; supporting a balance between the 4 aspects of health) as supporting resilience.
Shea et al. (2013)	First Nations; On-reserve; Female	13-16	20	Qualitative; Community based participation; Photovoice; Sharing Circle; Surveys; Exploring healthy bodies & body image from a female First Nation point of view	Resilience was defined as: "[p]ositive adaptation despite adversity" (p. 3), although the authors recognized that contemporary definitions encompass the family and community. Additional factors included: "1) connection to the land and a sense of place; 2) restoration of tradition, language, spirituality, and healing as personal and collective resources; 3) stories and storytelling as a privileged way of knowing and transmitted collective identity; and 4) political activism as a source of collective and individual agency." (p.10)	Having a healthy body, and healthy body image, was related broader social and community issues (such as loss and substance abuse), not just the physiological body. Healthy body image was tied to the ability to refrain from using addictive substances. Many participants struggled to define body image; the girls challenged societal ideals about beauty & defined it more broadly; incorporated ideas of health into their definitions of beauty.

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Snowshoe et al. (2015)	Aboriginal Mostly on-reserve	11-29	319	Mixed Interviews Focus groups Develop a scale that measures connection to culture in Aboriginal populations Strengths based approach	"Positive adaptation despite adversity" and a "natural, human capacity to navigate life well." (p.250)	A 3 factor model that explained the Cultural Connectedness Model; the resulting factors were labeled identity (Factor 1: positive sense of exploration and commitment to one's culture, 14 items), traditions (Factor 2: utility of traditional practices and language, 15 items), and spirituality (Factor 3: connection to the spirit world through an adoption of a FN worldview, seven items).
Snowshoe et al. (2016)	Indigenous Rural Saskatchewan & SW Ontario	11-24	290	Quantitative	Resilience was defined as an Indigenous person's ability to thrive despite the history of colonial influences and the effects of this history, as well as cultural connectedness and revitalization of First Nation culture.	Cultural identity was significantly positively correlated with self-efficacy, sense of self in present, sense of self in future, school connectedness, and life satisfaction. Traditions were significantly positively correlated with self-efficacy. Spirituality was significantly positively correlated with sense of self in the future and school connectedness. Incorporating cultural connectedness measures accounted for more variance in cohesive self-concept (with identity & spirituality contributing), school connectedness (identity, traditions, and spirituality), life satisfaction (identity, traditions, and spirituality).
Sutherland (2005)	First Nations On-reserve	11-15	20	Qualitative Semi-structured interviews Critical incidents Positive/strength based approach	Resilience was measured based on individual protective factors (school engagement, future orientation, intrinsic motivation toward school, and extrinsic motivation toward school) and micro-system factors (the importance placed on grades, the importance placed on approval by family, and teachers and self-monitoring of schoolwork completion).	Students with more protective factors could define science & distinguished between science & traditional knowledge (it was an additive effect); intrinsic motivation was higher for collateral learners. Students had a tendency to work together on more difficult assignments. Students were better able to recount the informal experiences that they had in relation to science as opposed to the formal knowledge they had learned.
Tait & Whiteman (2011)	First Nation and Metis	n/a	n/a	Theoretical Book introduction	None reported	N/A

Ungar et al. (2008)	Aboriginal	15-18	19	Community based participation research Qualitative Open-ended interview Constant comparative method Axial coding Identify characteristics of resilience as defined by youth who are coping well	Capacity to navigate to resources that sustain wellbeing, the capacity of the person's social and ecological environment to provide resources, and the capacity of individuals, families, and communities to negotiate for resources to be shared in culturally and contextually meaningful ways (p. 2)	7 tensions (different degrees of access) were identified as contributing to wellness for all individuals: access to material resources, access to supportive relationships, development of a desirable personal identity, experiences of power and control, adherence to cultural traditions, experiences of social justice, and experiences of a sense of cohesion with others.
Zahradnik et al. (2010)	First Nations	≥14	126	Quantitative	"Ability to thrive in the presence of adversity" (p. 409) An interaction between individual factors and environmental factors that individuals and communities use to navigate and negotiate toward wellbeing.	Found a negative correlation between resilience and PTSD, PTSD symptoms, as well as exposure to violence.

Definition of Resilience (Conceptualization and Measurement)

Some studies defined resilience in terms of how it was measured, or as the ability to successfully adapt in the face of adversity (Government of Canada, 2005a ; Sam et al., 2015; Snowshoe et al., 2015; Snowshoe et al., 2016; Ritchie et al., 2014; Zahradnik et al., 2010). Other studies provided more diverse and complex definitions. The complex definitions identified resilience as dynamic, being affected by many individual and community factors, as well as continuously changing and developing (Blackstock & Trocmé, 2005). Definitions of resilience were related to individual factors that encouraged the development of protective factors (i.e., that promoted resilience) to increase successful outcomes for youth (Filbert & Flynn, 2010). Specific skills, such as the ability to use available resources and having a strong sense of agency, were viewed as concepts that increased resilience and positive outcomes for youth (Lafferty, 2012; Ungar et al., 2008). Activities and feelings of interconnectedness were also articulated in terms such as meaningful participation, political activism, and meaning and purpose. A sense of belief in oneself as well as in spirituality was also important to the concept of resilience (Saskmoose et al., 2016; Snowshoe et al., 2016).

A unique view of resilience in Indigenous populations is evident through the incorporation of community-related resilience factors (Brooks et al., 2015; Dell et al., 2005). These community factors can be viewed as either autonomy and access factors or support and connectedness factors. Factors noted in the autonomy and access theme include community ability to provide necessary or helpful services, accessing resources in culturally meaningful ways, and being able to remain autonomous, resistant, and non-conforming (Hudson, 2016b; Hopkins, 2012). Within the support and connectedness theme the factors that emerged are: connection to the land and sense of place, collective identity, nurturance and support, as well as ecological and social interconnectedness (Hansen & Antsanen, 2016; Kral et al., 2014; Shea et al., 2013; Lalonde, 2006). The combination of individual factors with community and culturally based factors provides a more accurate, holistic model, of Indigenous resilience.

Identified Outcomes Related to Resilience

Promoting youth resilience in substance misuse residential treatment has been associated with positive outcomes (Dell & Hopkins, 2011). Approximately half of the youth surveyed by Dell and Hopkins (2011) reported abstinence 90 days after treatment, which increased to about 74% remaining abstinent after 180 days, and 84% of youth attending school. Similar to these promising overall outcomes, resilience scores have been associated with reductions in specific symptoms as well. For example, Ames et al. (2015) found that higher levels of optimism and self-esteem were associated with lower depressive symptoms. Resilience was also found to moderate re-experiencing symptoms after exposure to violence (physical, sexual, and emotional abuse; exposure to domestic violence), with lower levels of overall resilience being associated with increasing re-experiencing symptoms as the frequency of violence exposure increased (Zahradnik et al., 2010). These findings reinforce and extend the existing research, positioning resilience as an important feature for successful coping, into Canadian Indigenous samples.

Positive outcomes related to increased wellbeing of Indigenous youth have been reported. Increased resilience has been associated with improvement in school attendance, decreases in the number of office referrals, and increased academic performance in Language Arts and Math (Lafferty et al., 2012). Resilience was associated with increased confidence and skill development for youth engaging in a strength-based creative arts program (Fanian et al., 2015). Participation in the program, and the creative arts, was associated by the study authors to foster resilience, form relationships, and stimulate communication within northern communities.

Protective Factors That Promoted Resilience

Factors that promoted resilience for youth included: participating in community programs and activities, positive personal identity, relationships that foster community connectedness, positive peer and family relationships, engaging in cultural activities, creating connections and a sense of place, having positive experiences of social justice, and access to material resources (see Table 3 for an outline of resilience factors within studies). These resilience factors were associated with positive outcomes in school settings, substance use intervention programs, and mental health research. For example, an increased number and higher rating of protective factors (engagement with school, future orientation, intrinsic-, and extrinsic-motivation for school) was associated with higher rates of collateral learning strategies for scientific concepts (Sutherland et al., 2004). This finding suggests that youth were able to identify when it was appropriate to use and apply Indigenous knowledge, or non-Indigenous knowledge, and possibly be able to reconcile differences between them (Sutherland et al., 2004). Challenges to promoting resilience within Indigenous youth were described by Petrasek et al., (2015) and included restricted travel, access to the land, and ongoing difficulties engaging with traditional activities.

Discussion

The reviewed studies found that fostering resilience as a way to produce better mental health outcomes for Indigenous youth. Most studies suggested the use of a collaborative approach that engages community-based perspectives of culture to create a holistic model of resilience and wellness. The majority of studies described the role of resilience in facilitating better mental health outcomes for Indigenous youth in Canada. Resilience was described as a central component to fostering youth success. Although the definition and conceptualization of resilience varied across studies, it remained a valued factor in the promotion of positive mental health outcomes for youth. Facilitating youth success by fostering factors that promote resilience was deemed to be beneficial by the reviewed studies. Resilience was related to positive longitudinal wellbeing for youth, (Ritchie et al., 2014; Dell et al., 2005) being expressed as a way that youth cope with, and recover from, trauma in their life.

 Many studies relied on participants to individually define and discuss resilience, rather than conceptualizing the term for participants. Within many studies, a collaborative approach allowed youth to speak about resilience in a relatively unstructured manner (Saskamoose et al., 2016; Petrasek et al., 2015; Riecken, 2006). Participants were able to utilize their own

Table 3: Factors Promoting Resilience

Factor	Studies Identifying Factor
Participating in community programs and activities	Brooks et al., 2013 Lafferty et al., 2012 Petrasek et al., 2015 Ritchie et al., 2014
Positive personal identity (related to body image, self-esteem, confidence, etc.)	Anderrson et al., 2008 Dell & Hopkins, 2011 Fanian et al., 2015 Shea et al., 2013 Snowshoe et al., 2016 Ungar et al., 2008
Relationships that foster community connectedness	Hackett et al. 2016 Leibenberg et al., 2016 Riecken et al., 2006 Saskamoose et al., 2016 Snowshoe et al., 2016
Positive peer and family relationships	Brooks et al., 2015 Kral et al., 2014 Leibenberg et al., 2016 Pearce et al., 2015 Petrasket et al, 2015 Ungar et al., 2008
Engaging in cultural activities	Dell & Hopkins, 2011 Hackett et al. 2016 Kral et al., 2014 Leibenberg et al., 2015 Pearce et al., 2015 Petrasek et al., 2015 Saskamoose et al., 2016 Shea et al., 2013 Snowshoe et al., 2016 Ungar et al., 2008
Creating connection to land and a sense of place	Dell & Hopkins, 2011 Hackett et al., 2016 Leibenberg et al., 2016 Pearce et al., 2016 Shea et al., 2013
Having positive experiences of social justice	Ungar et al., 2008
Access to material resources	Ungar et al., 2008 Pearce et al., 2016 Saskamoose et al., 2016

personal definition of resilience, and associate it with their own outcomes of success. In some of the quantitative studies, the measures used were either created by the study investigators based on the needs of the communities (e.g., Snowshoe et al., 2016) or previously validated within a Canadian Indigenous population (Ungar at al., 2008; Zahradnik et al., 2010). A collaborative and flexible approach allowed communities to be independently engaged in discussions relatively unhindered by researcher conceptualizations of this construct.

Examining resilience using collaborative approaches within Indigenous communities has identified definitions of resilience that have deviated from previously conceptualized non-Indigenous models (Kirmayer et al., 2011). Within these non-Indigenous constructs of resilience, less emphasis is placed on the complexity and dynamic nature of greater systems outside an individual, such as family and community. Individual characteristics such as

hardiness or intelligence fail to account for environmental protective factors, such as cultural identity or land-based activities, which are typically discussed within Indigenous definitions of resilience. Non-Indigenous conceptualizations of health and physical adaptation may not be applicable within an Indigenous context. Greater meaning has been given to the definition of resilience for Indigenous populations through the use of collaborative community methods, such as narratives related to stories of self-identity, personal histories, and cultural teachings (Kirmayer et al., 2011).

Although conceptualizations of Indigenous youth resilience in the retrieved studies often did align with existing non-Indigenous definitions of resilience, there was a unique prioritization Indigenous culture reviewed in many studies. Engagement in culture, and promoting a positive cultural identity was both a factor that promoted resilience and an outcome variable that demonstrated resilience in youth. Often considered to be a factor in traditional models of wellbeing (Ungar et al., 2008), engagement in culture was not simply one factor related to Indigenous youth resilience, it was a key factor. The promotion of resilience was considered dynamic and particularly dependent upon the cultural context in which it was fostered. Resilience in youth was associated with their engagement in culture, such as participation in land-based activities, traditional language use, or ceremonies.

This finding is similar to research that has identified how engaging with culture has facilitated positive outcomes for Indigenous youth. Cultural continuity, described as processes of transformation within past of traditions, has been identified as a protective factor against Indigenous youth suicide (Chandler & Lalonde, 2008). A review of the effects of traditional language use by Indigenous youth found language use was associated with positive physical effects such as reduced smoking, better self-reported wellness, and less rates of diabetes (Whalen, Moss, & Baldin, 2016). A program that promoted a strengths-based approach to increasing physical activity in First Nations youth found that physical activity was predominately associated with cultural activity, through active community contributions, land-based activities, and other wellness initiatives (Baillie et al., 2016).

A holistic understanding of wellness was used in almost all studies. Resilience was associated with promoting the overall wellbeing of individuals by fostering a balance between emotional, physical, mental, and spiritual elements. The successful promotion of resilience was associated with increased wellbeing of youth that can be seen in a greater sense of self confidence, a sense of positive identity, as well as connectedness to family and the greater community. This holistic perspective of wellbeing and resilience suggests that the key factors in resilience vary between Indigenous and non-Indigenous communities.

The prioritization of Indigenous measures of wellbeing and individualized markers of success aligned with community-based participatory approaches of the reviewed studies. Most studies used a collaborative approach to completing their research goals. Research questions were often defined by communities. Studies engaged community stakeholders throughout the research process, and promoted youth to guide the research questions and study design. Incorporating community members and youth into these projects ensures that the methods and results align with cultural values and beliefs, suggesting that an accurate portrayal of Indigenous resilience has been demonstrated.

Study Limitations

Due to the wide variance of study methods and approaches, it was difficult to compare resilience protective factors and youth outcomes across studies. Studies could not be quantitatively compared or rigorously assessed using typical review standards due to the limited availability of studies. If such standards were applied, such as those indicated by the Cochrane Review (Higgens & Green, 2008), no studies would have met criteria.

Additional factors that have been previously identified as protective factors or factors that promote positive outcomes in youth functioning, within Indigenous populations were not included in this study. Prior research regarding the promotion of a common cultural identity, including a shared connection to the land (Turner, 2014), language use (Ball & Lewis, 2014), and positive body image (McHugh, Coppola, & Sabiston, 2014) have been associated with increased Indigenous youth wellbeing. For example, for First Nations youth, family assistance with homework, participating in sports, having positive peer relationships, and having a positive school environment were associated with positive mental health outcomes (Guèrevemont, Arim, & Kohen, 2016). Although factors such as these have been identified as protective factors within Indigenous youth populations, studies were not included in the review unless results were explicitly associated with resilience. It is likely that some protective factors and positive outcomes that demonstrate overlap with the construct of resilience were missed due to an absence of these specified search terms.

The variety of populations within this study reduced the feasibility to generalize the study results. The current research surrounding Indigenous resilience surveyed youth living in remote communities, urban areas, and attending residential treatment programs. This breadth in contextual factors, in light of the holistic nature of resilience in Indigenous communities, makes broad generalizations difficult. Furthermore, the inclusion of additional search terms, such as "coping skills", or "protective factors", may have retrieved more studies that may not have explicitly referred to resilience, but were nonetheless, assessing it. Interpretation of the results presented should take these limitations into consideration.

Future Directions

This review provided a number of factors that promoted resilience for Canadian Indigenous youth, as well as outcomes related to those youth that demonstrated resilience. Best practices for the measurement of resilience within Indigenous youth populations is an area the future research should seek to examine. The concept of resilience remains inconsistently defined among studies. This could be due to the various meanings across populations, but also could indicate a disjointed collaborative understanding. Assessing more youth definitions of resilience across Canadian Indigenous populations would be a valuable contribution to existing literature.

Applying non-Indigenous indicators of resilience to those that are previously defined within an Indigenous framework would be a valuable contribution. Indigenous indicators of wellness, such as those defined within the First Nations Mental Wellness Continuum Framework, may offer further indicators of resilience in Indigenous populations (Assembly

of First Nations, 2015). Purpose, Hope, Belonging, and Meaning have been identified as measurable indicators of Indigenous wellbeing, but how such factors promote resilience within Indigenous populations has yet to be identified. Some studies in the current review have described similar factors to these indicators and further research illustrating outcomes related to these constructs could be examined. Given existing knowledge of how factors that foster resilience vary significantly within cultures (Walls et al., 2016), further examination of indicators of success for Indigenous populations is required.

Many studies reported protective factors that promoted resilience for youth, or outcomes due to high resilience, but few reported both process and outcome variables. Longitudinal studies that report Indigenous youth resilience factors and subsequent outcomes could provide evidence for development of future practices that support and promote youth resilience. The age range of populations classified as youth studies was high, ranging from 12 to 30. Recognizing and researching the evolving needs of various age groups as youth mature would also be beneficial.

Examining population differences, such as between urban and rural youth, Elders, or residential school survivors could identify generational differences in resilience within Indigenous communities. For example, it is recognized that the location of youth can directly influence their development of protective factors, development of resilience factors, and subsequent mental health outcomes. Having access to adequate services, support networks, and other programs or services, can vary significantly based on where youth reside.

Research evidence about how reported needs, strengths, and barriers to success affect these populations could be useful to inform local youth programs and services. Ongoing program evaluation and reporting of youth outcomes remains necessary. Of the programs reviewed, many reported increasing resilience in youth, but did not report measurable outcomes. Specific components of programs that are associated with better outcomes for youth could be provided.

Conclusion

The literature reviewed reported factors related to increased resilience and outcomes related to resilience for Canadian Indigenous youth. Definitions of resilience demonstrated complexity and pervasiveness, and numerous contributing factors, for Indigenous youth. Current resilience frameworks are conceptualized as resulting from exposure to negative life events and successfully navigating past them. Within Indigenous models, consideration of the context by which an individual emerges is fundamental to the development of resilience. A continuous exploration of how existing resilience frameworks integrate within an Indigenous perspective is required. With respect to Indigenous populations, particularly those that are characterized as enduring greater levels of adversity as compared to non-Indigenous communities, resilience remains fostered in the presence of hardship. When Indigenous communities are privy to the same amenities as non-Indigenous ones, existing factors of resilience may require re-conceptualization. As it stands, Indigenous resilience research indicates that individuals, families, and communities, do not only cope with adversity, they can thrive within these circumstances.

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