

## Role of social, cultural and symbolic capital for youth and community wellbeing in a rural Alaska Native community



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### ABSTRACT

Health promotion programs by and for Indigenous Peoples increasingly use strength-based Indigenous approaches aimed at reinforcing protective factors rooted in their cultures and traditions. These protective factors can counteract the deleterious effects induced by the rapid social changes related to colonization. Western social scientists defined cultural, social and symbolic capital as assets akin to social strengths that can promote health. It is important to understand Indigenous perspectives on these social and cultural capitals, and the ways their interplay can promote wellness. Using the qualitative methods photovoice and digital storytelling, we elicited the perspectives of Athabascan middle and high school students participating in the Frank Attla Youth and Sled Dog Care-Mushing Program in their home community of Huslia in Interior Alaska. Subsequently, we disseminated the stories and preliminary findings in Huslia, and conducted focus groups with adults to triangulate with the youth perspectives. Deductive and inductive thematic content analysis of youth stories and photos revealed the impacts of the program on them and their community. Youth reported gains in cultural, social and symbolic capital and shared what these forms of capital mean in their cultural context. Cultural capital gains were mostly in its embodied form, e.g. in work ethics, perseverance and the value of cultural traditions; social capital gains revolved around relations with peers, adults and Elders, nature and animals, as well as social cohesion and sense of belonging in Huslia; Symbolic capital was reflected through pride and spirituality. The students' stories also illustrated their perspectives on how the program affected their wellbeing, through physical activity, healing relations with dogs, increased self-esteem and visions of a bright future. Adults corroborated youth perspectives and shared their observations of program impacts on discipline, academic and life skills and resilience. These findings could be used to guide development and assessment of culturally-based wellbeing promoting interventions.

### 1. Introduction

Increasingly, health promotion programs in Indigenous communities use a strength-based approach, focusing on the reinforcement of protective factors rooted in people's culture and traditions (Antonio et al., 2020; Rasmus, Charles et al., 2014; Rasmus et al., 2019). These programs help address the mental and physical health disparities Indigenous people experience (Gone & Trimble, 2012), linked to the rapid disruptions of social connections and culture loss related to colonization and globalization (Ayunerak et al., 2014; Kawagley et al., 1998; Wexler, 2014; Wexler & Goodwin, 2006). These social changes involve a loss of

cultural and social capital, suggesting an explanation of the ways culturally informed strength-based programs can facilitate healing based on capitals theory.

#### 1.1. Capitals theory

Capitals theory emphasizes the importance of economic, cultural and social capital, as well as their interplay, in promoting good health (Abel, 2008; Veenstra & Abel, 2019). Capitals theory originates in the work of French sociologist Pierre Bourdieu, and is itself an aspect of a more complex theory of practice (Grenfell, 2014). Bourdieu defined capital as

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accumulated labor which shapes social order and can take material or immaterial forms (Bourdieu, 1990). The originality of his work was to show the importance of non-economic forms of capitals that we focus on in this article. Although the effect of socioeconomic status on health has been well documented (Glymour et al., 2014), capitals theory offers ways to better explain how complex social interactions may influence health outcomes, beyond classic indicators such as income, education, or occupation (Abel & Frohlich, 2012) and allows for a broader interpretation of health accounting for Indigenous viewpoints.

Cultural capital can exist in three forms: embodied, objectified, and institutionalized. The most fundamental form is embodied cultural capital. It is acquired through learning or socialization to the point that it cannot be separated from the body or the mind. Examples include a trade or knowledge that may enable someone to get a job, as well as subtlest aspects, such as the way one speaks or which music they listen to, that can affect where people stand in social space (Bourdieu, 1984). From Indigenous points of view, embodied cultural capital might include skills in how to survive and thrive in a harsh environment (Dalziel et al., 2009). The objectified form corresponds to tangible cultural resources such as tools and books. From Indigenous perspectives, this might include tools such as a fishwheel to catch fish and share them with community members. The institutionalized form is conferred by institutions in the form of credentials (e.g. a University diploma), bringing legitimacy to its holder (Bourdieu, 1990). Examples relevant for Indigenous communities might be the status as an Elder, or selection on an important position in the tribal council. An important mechanism by which cultural capital shapes health outcomes is by promoting people's chances and guiding their choices for changing living conditions that affect health outcomes for themselves and others (Abel, 2007). For Indigenous people, cultural capital includes a shared recognition of the individual's and group's cultural identity (e.g. belonging to a tribe). It is often rooted to a specific space and place, as well as cultural knowledge and practices. For example, having many speakers of the tribe's ancestral language or people participating in tribal ceremonies in a community increases cultural capital (Joe, 2014).

Bourdieu defined social capital as being the actual and potential resources conferred by the membership in a group (Bourdieu, 1990). This resource-centered view of social capital was supplemented by conceptualizations focused on social cohesion, trust and reciprocity and place attachment (Coleman, 1990; Putnam, 2000). The effects of social capital on health have been widely studied in its social cohesion conceptualization and to a lesser extent in its resources (Bourdieuian approach (Carpiano, 2007; Kawachi et al., 2008). Most studies show a beneficial effect on health (Gilbert et al., 2013), although a few show a deleterious effect. For example, an excess of bonding social capital within disadvantaged communities may be detrimental to mental health, particularly by increasing the burden of obligations such as providing support to other community members (Mitchell & LaGory, 2002). One difficulty in social capital research remains the lack of consensus on its measurement which has to be adapted to the study's context (Kawachi et al., 2008; Villalonga-Olives & Kawachi, 2015). There have also been critiques of applying the traditional understanding of capital theories to third world countries or Indigenous communities, mostly based on applying Putman's conceptualization of social capital to economic development. Too often, conceptualizations of social capital center on Western ideologies, ignoring local cultures and the socio-political environments that shape communities' lives and experiences (Stewart-Withers & O'Brien, 2006). In contrast, Bourdieu's conceptualization includes cultural and symbolic capitals, facilitating integration of Indigenous ideas, values and symbols in health promotion programs.

Symbolic capital confers its holder prestige, legitimacy and value, resulting in symbolic power (Bourdieu, 1990). Bourdieu first highlighted symbolic capital following his ethnographic work on Kabyle tribal society during French colonial times, as a way to explain the social interactions largely based on honor in that population (Bourdieu, 1958). Similarly, the importance of largely symbolic activities such as rituals or

dances, is also highlighted in Indigenous health research in suicide prevention programs for Alaska Native youth affected by colonization (Ayunerak et al., 2014). This form of capital is part of a different dimension than the others; therefore, a single resource can represent symbolic capital as well as another form. For example, a diploma from a prestigious University, or status as an Elder, represents both symbolic and institutionalized cultural capital.

Capitals interplay represent how the different forms of capital are transformed from one into another or facilitate each other, and are transmitted in sometimes hidden ways. For example, an obvious transformation of economic capital into objectified cultural capital is when one buys books, tools, or a boat. A subtler interplay is when distinctive tastes such as knowledge about classical music (embodied cultural capital) facilitates the acquisition of social capital, potentially promoting social mobility through capitals rich relationships. Similarly, knowledge about hunting facilitates the ability to share food with families and Elders in an Indigenous community, fostering respect. Capitals interplay in the intergenerational transmission of capitals can have important health-related consequences. For example, a study in Switzerland found that parental economic capital had an important mediating effect on the association between cultural capital of parents and self-rated health of their sons (Veenstra & Abel, 2015). In an Indigenous context, the success of health education programs that incorporate cultural and social capital as part of a comprehensive approach in Native American communities, has been attributed to the fact that they allow people to make pragmatic decisions in part based on their Indigenous holistic worldviews (Weiner & Canales, 2014).

Although Bourdieu's goal was to explain the transmission and perpetuation of social inequities by dominant classes, scholars interested in the effect of capitals on health and wellbeing generally take a protective factor approach where capitals facilitate behaviors leading to positive health outcomes (Abel, 2007). This relates well with studies in northwestern Alaska, that emphasize the importance of using traditional knowledge to alleviate the effects of colonization and rapid social change (Wexler et al., 2013; Wexler & Goodwin, 2006). Such cultural traditions help forge social connections, provide youth with traditional relational sources of strength, and facilitate a sense of belonging. Many of these community strengths show parallels with cultural and social capital (Mignone & O'Neil, 2005; Schaefer-McDaniel, 2004).

One common pathway for traditional or ancestral knowledge to be shared is through storytelling. Stories that convey values and lessons for living may contain elements of both social and cultural capital. For example, a story that an Elder shares with a grandchild may contain elements of the importance of place as well as relationships (Wilson, 2008). Stories are integral to the Indigenous worldview where everything is connected – humans, animals, and plants. Indigenous worldviews and practices have been expressed through the Athabascan Cultural Values established during the 1985 Denakkanaaga Elders Conference (Denakkanaaga Elders Conference, 1985). These values and practices are time-honored assets that contribute to community wellness, and can be seen as Indigenous elements of social and cultural capital. Understanding Indigenous perspectives on social capital through their voices, values, and stories can facilitate greater relevance and inform strategies to build social and cultural capital in ways that resonate with Indigenous communities' worldviews.

## 1.2. Current study

In this article, the focus is on examining how one could expand capitals theory (primarily based on Bourdieu's work) through Indigenous ideas and values, and apply these perspectives to understand culturally-based programs aimed at reducing health disparities experienced by Alaska Natives. Integrating indigenous ideas and values is essential to counter implicit colonialism still pervasive today (Wexler, 2009). Creating a healthy community is important for the wellbeing of Alaska Native peoples, but also because Alaska Native peoples make up

almost 20% of Alaska's population, the impact extends to the state as a whole. Studies have found associations between aspects of Alaska Native people's ancestral culture and health, illustrating their value in interventions. For example, in a sample of Yup'ik adults, the consumption of traditional foods was associated with lower cardiometabolic risk (Ryman et al., 2015). Traditional cultural activities, including hunting, fishing, gathering, dances and ceremonies, offer the opportunity for Elders to share cultural values such as sharing, humility or spirituality (Ayunerak et al., 2014). Such cultural traditions and values facilitate coping with the stress induced by rapid cultural change in Alaska Native populations (Rivkin et al., 2019). However, assessing the effects of cultural practices may require complex models. For example Yup'ik, Western, and bicultural cultural practices (such as speaking Yup'ik and English at home, or practicing a Yup'ik and Western lifestyle) had the largest protective associations with cardiometabolic risk compared to education, socioeconomic status, physical activity, nutrition and tobacco use in a study of Yup'ik adults (Philip et al., 2017).

Although the Indigenous viewpoint (focused on the restoration of cultural values and practices) and the capitals theory viewpoint on wellbeing promotion have been studied separately, little has been published to bridge those two approaches. Here, we attempt to answer the following question: How do traditional Alaska Native cultural values intertwined with cultural, social and symbolic capital contribute to youth and community wellbeing during a culture-based program in a rural Alaska Native community? We use the results of the qualitative analysis of digital stories in which youth share their perspectives on how the Frank Attla Youth and Sled Dog Care-Mushing Program (FAYSDP) affects them and their community; These analyses utilize the lenses of both Indigenous and western science perspectives by coding our data using both approaches.

## 2. Materials and methods

### 2.1. The Frank Attla Youth & Sled Dog Care-Mushing program (FAYSDP)

Our research project was a partnership between the community of Huslia and the Center for Alaska Native Health Research (CANHR) at the University of Alaska Fairbanks (UAF), to understand youth and adult perceptions of the Frank Attla Youth and Sled Dog Care-Mushing Program (FAYSDP), and evaluate if it has the potential to improve behavioral health outcomes by building social and cultural capital. It was funded by the NIH-BUILD Biomedical Learning and Student Training (BLaST) program at UAF. The FAYSDP was started in early fall of 2012 in Huslia, a rural, mostly Athabascan community of about 300 people located on the Koyukuk River, 250 miles from UAF and accessible only by small plane, boat, snowmobile or dog team. Athabascans represent an interrelated complex web of related languages indigenous to Interior Alaska and Western Canada with ties to some tribes from the Western United States (Krauss, 1987). Denaakk'e (Koyukon) occupies the largest part of the Athabascan region along the Koyukuk and middle Yukon rivers (Holton et al., 2010). Huslia has a rich history with sled dogs, originally helping them with survival but later also for trapping and racing (Attla et al., 2011). The dogs hold an important place in Koyukon culture, especially in traditional spirituality where they have a place between the human and natural realms, possessing a sixth sense that normal humans or other animals do not have (Nelson, 1983). Legendary sprint musher George Attla was from Huslia and the program is named after his son Frank, who passed on at the age of 21 due to health-related issues. The program has involved middle and high school students who learn dog handling and mushing skills from kennel owners, Elders, and other volunteers from the community. It includes an in-class curriculum, intergenerational discussions, and hands-on activities, covering diverse topics such as nutrition, anatomy, training, kennel maintenance, dog care, as well as leadership and life skills. The program also allows for some of the students to participate in local and championship races

(Schwafel, 2013; Turco, 2016).

The research was a collaboration with school and tribal partners. A Community Planning Group (CPG) composed of four community members engaged in wellness promotion, guided the planning, implementation, interpretation, and dissemination process of the study. Decisions were made through a collaborative, culturally-grounded Community Based Participatory Research (CBPR) model successfully used in past CANHR work (Rivkin et al., 2013, 2019), which addresses the experiences, cultural values, strengths, and challenges of AN communities, and engages tribal members as co-researchers who direct the research process to ensure its fit with their needs and priorities. The study also aligned with the community's goals and objectives on culture and wellness in their Huslia Community Plan (Huslia Tribal Council et al., 2017). The participation of two Koyukon Athabascan undergraduate students (including one from the community of Huslia) further increased the cultural groundedness of the project. Their cultural and community knowledge, perspectives, and connections enriched planning, implementation, and dissemination of the research as well as the codebook development and the coding and interpretation of the data. The UAF Institutional Review Board (IRB) and the Huslia Tribal Council (HTC) reviewed and approved the research, providing assurance of tribal ownership of the data and expected benefits of the study for the community.

### 2.2. Participants

All middle school and high school youth in Huslia were invited and decided to participate in the project. The youth included 10 middle school as well as 5 high school students. Out of the 15 participants, 9 were boys, 6 were girls, and all were Alaska Native. Youth participants and their parents signed assent and parental consents for participation, as well as media releases.

### 2.3. Data collection proceedings (Photovoice, digital storytelling and focus groups)

We conducted photovoice and digital storytelling activities with youth to understand their perceptions of the FAYSDP, followed by dissemination activities and focus groups with adults to understand additional elements of social and cultural capital affected by the program. Data collection with youth took place between October 2017 and May 2018, and continued dissemination activities and focus groups extended to May 2019. Photovoice and digital storytelling are both qualitative methodologies which enable participants to create, reflect on, and share their stories, and aim to give them a voice to influence policymakers (Lambert, 2012; Wang et al., 1998). Photovoice and Digital Storytelling help people to communicate their community's struggles and strengths, and can spark community discussions and new perspectives, serving as tools for empowerment and transformation (Gubrium & Turner, 2011; Wang & Burris, 1997). As such, these methodologies are emerging as important strategies to promote health, wellbeing, and cultural revitalization across a variety of contexts, including in tribal communities (Cueva et al., 2015; Gabel et al., 2016; Wexler et al., 2013).

We began with a photovoice training session with the middle school youth, including (1) ethics of taking pictures in private or public settings, emphasizing safety, confidentiality, and consent; (2) development of photo assignments relevant to study goals, e.g. take photos representing what the FAYSDP means to the youth, how it affects their community; and (3) technical review of camera handling, picture taking and storage. Youth took and gathered photos over the course of several months during the mushing season to share their perspectives. We returned to facilitate sessions where the youth presented their photos, identified themes, posted comments, and engaged in discussions about the meaning and implications of the program for them and their community (Wang et al., 1998).

We then conducted digital storytelling training sessions with middle and high school youth. Digital storytelling combines multimedia elements (e.g. images, music, voice-over, and video) to succinctly share a personal story (Lambert, 2012). The youth learned about the purpose of digital storytelling, thought through the story they wanted to convey based on their perspectives of the FAYSDP, and developed and refined it in story-circle discussions. They created scripts and storyboards (plans for how their words will fit with photos, images, music). They then recorded their narrations and each put together a 3-minute digital story. The middle school youth drew from materials and perspectives from the photovoice pictures, themes, and discussions, in addition to other photos and reflections relevant to their story. At the end of the digital storytelling workshop, youth and their parents completed digital storytelling releases providing consent for sharing their stories. All of the middle and high school youth then shared their digital stories with each other, the facilitator team, family, friends, and the community, in a celebratory film screening in the community of Huslia. The community planned future photovoice and digital story exhibits to educate and build awareness.

#### 2.4. Data analysis

Qualitative analysis was conducted using Atlas-TI (a data management and analysis software program) (Muhr & Friese, 2004). We used a combination of directed content analysis (deductive strategy) and inductive approaches to analyze the transcripts and digital stories (Hsieh & Shannon, 2005). The deductive strategy utilized existing theoretical frameworks and knowledge as a starting point for codebook development. Deductive codes included Athabascan cultural values communicated in the 1985 Denakkanaaga Elders Conference definition (Denakkanaaga Elders Conference, 1985), as well as themes in Schaefer-McDaniel's framework on youth social capital (social networks and sociability, trust/reciprocity, and sense of belonging/place attachment) (Schaefer-McDaniel, 2004), and themes based on Bourdieu's classification of cultural capital (Bourdieu, 1990). The inductive strategies involved identifying emerging themes expressed by the youth in their digital stories and photos, as well as themes they noted when discussing and grouping the collection of photos taken by them and their classmates. The integration of Athabascan cultural values in deductive strategies, and the focus on youth voices emerging in the inductive strategies facilitated the integration of Indigenous cultural perspectives on social and cultural capital. The research team coded to new themes, existing themes, or revised theme categories as appropriate based on the emerging data (MacQueen et al., 1998). After an initial codebook was developed and agreed upon, team members coded designated sections/materials independently. The team, composed of three faculty members and two undergraduate students, discussed coding, codebook refinement, and any discrepancies were discussed to consensus. Procedures to maintain trustworthiness of data included the use of multiple measures, multiple perspectives in analysis, multiple coders, and community involvement in interpretation and dissemination (Morrow, 2005). Table 1 presents the codebook and code groups used in this study.

#### 2.5. Community dissemination

We discussed findings from the youth photovoice and digital stories with CPG members, and conducted community-wide presentations of findings. The CPG provided their perspectives and interpretations on the findings, and their thoughts on additional elements of social capital they felt were addressed by the FAYSDP. They also provided guidance for the focus groups to obtain additional community perspectives, and helped plan strategies to share the youth photos and digital stories. With help from our CPG, we recruited participants for two focus groups (11 women and 8 men). The focus group sessions began with a presentation of themes identified in the youth photos and digital stories, and elements of capitals and cultural values emerging in these analyses. We then

**Table 1**

Codebook for Athabascan cultural values, cultural, social, and symbolic capital.

Category	Code	Description/Examples
Athabascan Cultural Values	Care and Provision for the Family	Ensuring the family and large extended family have food and are cared for.
	Family Relations and Unity	Each family member has an important role that changes as they age. Family members learn from one another, look after one another in times of need, and work together for the good of the whole.
	Honesty and Fairness	It involves being humble, honest, and fair with others, including during criticism or correction, and not disrespecting a tribal member or the community.
	Honoring Ancestors	This value is represented by respecting their ancestors' teachings, following cultural traditions, sharing ancestral stories, taking pride in their ancestors' successes, and making their ancestors proud.
	Humor	Humor is essential to keep spirits up during good and challenging times; also used in teaching lessons.
	Love for Children	Children represent the future, and it is expected that the community watches over them to ensure they are safe, fed, and socialized to reach their potential.
	Practice of Native Traditions	Learning, participating, and helping in the numerous traditional activities as well as developing Native language skills
	Respect for Elders	Treating Elders with respect while learning from them, ensuring they are cared for, and thanking them.
	Respect for Knowledge & Wisdom	Acquiring new knowledge through quietly watching with a willingness and eagerness to learn from Elders or culture bearers.
	Respect for the Land and Nature	Natural resources should be appreciated, harvested respectfully, utilized efficiently, and disposed of properly while not intentionally doing harm.
Cultural Capital	Self-sufficiency and Hard Work	This includes providing for family and yourself while being efficient and preparing for the future. By staying busy, you are helping your mind and body.
	Sharing and Caring	Families and communities come together to ensure that no one is left out; everyone is cared for and has what they need.
	Spirituality	Alaska Natives have a deep connectedness with the land, animals, and people that also involves reciprocity.
	Village Cooperation and Responsibility to Village	Represents a sense of community that includes care of children, and helping each other while not expecting anything in return.
	Embodied cultural capital	Resources that became part of our body or mind. Includes the cultural value Self-sufficiency and Hard Work as well as knowing how to

(continued on next page)

**Table 1 (continued)**

Category	Code	Description/Examples
Social Capital	Objectified cultural capital	take care of dogs, or knowing a craft.
	Institutionalized cultural capital	Material resources that we own. Includes books, good sled dogs, mushing equipment.
	Social networks and sociability	Resources that have been conferred by institutions. Includes a diploma or distinction, for example having won a race.
	Trust and Reciprocity	Resources that one can mobilize through relationships. Includes connections for mushing, connections to animals, kennel visits, community relations, peer and youth-adult relations.
	Sense of Belonging/Place Attachment	Benefits of a high social cohesion. Includes the cultural values of Sharing and Caring and Village Cooperation and Responsibility to Village as well as sharing of dog resources.
	Investment	Includes the cultural value Practice of Native Traditions as well as attachment to Huslia and to the mushing community.
	Symbolic Capital	Includes investments by the community, school and mushers. Characterizes relationships or personal assets that bring recognition, prestige or fame, for example connections to George Attla who has worldwide recognition.
	Pride and recognition	Restoration of the pride Alaska Native people lost through colonization. Highly related to symbolic capital.
	Positive future	Seeing good things in the future, feeling happy, excited, confident and hopeful about the future. Includes feelings that the ACHILL program will have positive future effects for them or their community.
	Keeping busy	Represents the value of keeping busy and how it prevents boredom and its negative health consequences such as addictions.
All forms of Capital	Program good for Huslia	Talking about how the Frank Attla Youth Sled Dog Care and Mushing Program is good for Huslia.

explored participants' perspectives on these themes, asking how they fit with their observations and experiences, and what additional ways they felt the FAYSDP affects their youth and community. This further facilitated integration of Indigenous worldviews into understanding the social and cultural capitals built by the program. The focus groups were recorded and transcribed. We then coded the transcripts with emerging themes and subsequently compared the themes produced with the ones of the youth data, noting the differences or additions in a process of triangulation.

### 3. Results

Our study reveals how the youth of the FAYSDP program talked about aspects of cultural, social and symbolic capital as well their views of the potential health consequences of participating in the program. Fig. 1 presents the proportion of youth participants having at least one quotation for a particular code (theme) for codes reported by at least half of the participants. Some of the most commonly discussed elements of social capital involved youth adult relations and connections to animals

(social networks and sociability), as well as Huslia attachment (sense of belonging/place attachment) and responsibility to village and village cooperation (trust/reciprocity). Many participants also discussed elements of symbolic capital, including pride and recognition and spirituality, as well as cultural capital, including practice of Native traditions and embodied cultural capital. All digital stories are available to view on the A-CHILL website (Turco, 2021). All youth quotes originated from their digital stories, scripts, and photovoice comments, and are presented verbatim.

#### 3.1. Investment and objectified cultural capital

Investment is necessary to accrue any kind of capital, and the youth noted and appreciated the investments and efforts that the mushers, the school, and the community as a whole devoted that made the program possible. The students noted how the program "means a lot to me" and "means a lot to Huslia". They also related investment to objectified cultural capital through the program, mostly in the form of dogs and equipment invested and shared by the few who had dogs. Dogs are expensive to maintain and the youth recognized that the program helped the community maintain the activity of dog mushing through material support. Here, a middle school boy describes some of the mushers' involvement.:

In the Program of Frank Attla youth dog mushing, ever since kids got in 6th grade they start going to kennels like Wesley Henry and Wilson Sam also Floyd Vent senior. So when we go to the kennels we help them work with their dogs like put hay in their barn and pick up poop and help hook up dog to the gain line for the dogs' next run.

#### 3.2. Embodied cultural capital

Youth learned how to work with the dogs and take care of them. They shared how working with dogs taught them determination, perseverance, the value of hard work, and the importance of their cultural traditions. The skills and values they learned help them to achieve goals. The intergenerational transmission of knowledge and values created embodied cultural capital, as expressed by this middle school girl.:

My favorite part of being here is the dog program, I like to get out and help out with dog yards. It is a great opportunity for me to be able to learn how our elders lived years ago and how to take care of and raise dogs.

The youth reflected on how dog mushing was a part of who they were. They learned from Elders and mushers about their people's history, how dogs were a part of their past, present, and future. The youth also learned that the dogs too were their teachers.

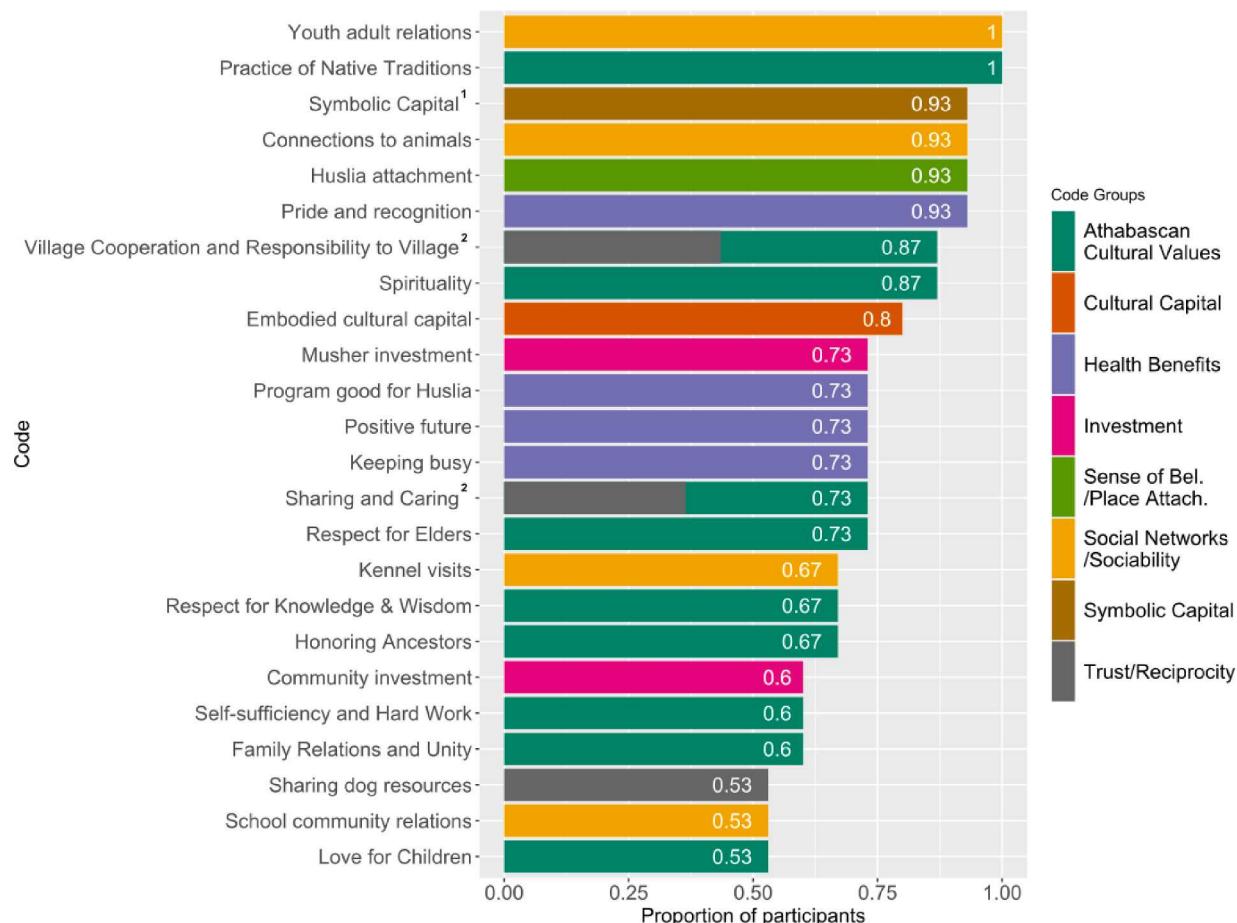
#### 3.3. Institutionalized cultural capital

Overall, few of the youth mentioned institutionalized cultural capital; however, some of the youth did mention their success in dog racing and the success of their family members in well-known dog races as expressed by this middle school boy.:

My grandpa Warner Vent was an Iditarod musher, in the early 1970s he won second place twice. He is the one who has really inspired me to get involved with dogs and this program.

#### 3.4. Social networks and sociability

The youth emphasized the importance of peer relations (mostly built around fun, understanding each other's perspectives, and bonding around a common interest). They discussed how relationships with dogs



**Fig. 1.** Proportion of youth participants having at least one quotation for a particular code. Only codes discussed by at least half of participants are displayed here. Colors indicate the different code groups. <sup>1</sup>Symbolic Capital is a calculated code defined when either Pride or recognition or Spirituality were present; <sup>2</sup>The Athabascan cultural values Village Cooperation and Responsibility to Village and Sharing and Caring were also included in the group Trust/Reciprocity (Social cohesion aspect of social capital).

brought people together, broke through isolation, provided friendship, brought peace and wellbeing, and connected them to cultural traditions. These relationships nurtured feelings of pride, and values of hard work, perseverance, and loyalty.

Youth discussed relations in the mushing world outside the community, mostly races or dog related activities at neighboring communities and statewide, but potentially nationwide and internationally. The dog mushing community reaches to other communities the students have ties with, providing connections to mushers outside their village.

The youth reported many relations with adults, including the mushers and other members. These relations helped to build mushing skills (embodied cultural capital) with the youth understanding that these skills will translate into life skills useful in the future. Relationship building with Elders is particularly important as Elders are traditionally responsible to share culture through oral communication.

The program also brought connections between the community and the school. School relations with communities can be challenging in rural Alaska, where the teacher turnover rate is high and impacts community trust and quality of their children's education (Taylor et al., 2017).

Youth participants saw connections to animals as extremely important as well as being a source of fun. It is also notable that youth perceive some of the teaching as being done through the dogs. The symbolic aspect of the connections with animals is also important and will be discussed in the symbolic capital section. This middle school girl gives a preview of some of the social activities during the program:

Our middle school class of Jimmy Huntington school, goes to dog yards ... Each dog yard is different from the other. At Wesley's dog yard we go running with the dogs. At Wilson's dog yard he tells us stories, and then we go outside and clean up the dogs, sometimes we run the puppies. At Floyd's dog yard we play with the puppies and cut food for the dogs. We sometimes harness the dogs and let Floyd run them while we wait and play with the puppies.

### 3.5. Trust and reciprocity

Many of the youth discussed trust and reciprocity, corresponding to social capital's social cohesion dimension, as a positive aspect of the program. We found that this dimension was almost indistinguishable from the Athabascan cultural value: village cooperation and responsibility to village, and often co-occurred with the other values: sharing and caring and respect for Elders. Connections to dogs facilitated trusting mutually beneficial intergenerational relationships in the community.

As part of the program, the youth gain trust from and help the mushers in their kennels. Another aspect of this dimension of social capital is the sharing of dog resources, which are hard to come by in this remote community. This middle school girl emphasizes here some of the aspects of trust and reciprocity, as well as symbolic institutionalized cultural capital brought by the program:

I knew late grandpa George, he was a very strong, hardworking, dedicated man who loved his dogs. George was and still is known for

his great career in dog mushing, and was even called the “Huslia Husler”. Everyone in Alaska should know him. George loved his dogs and the community he was in, but soon some bumm things got into town. He then thought of making the Frank Attla Youth and Sled dog care mushing program, to help the community come and work together.

### 3.6. Sense of belonging and place attachment

The program nurtured the youth’s sense of belonging by highlighting the long history and impact of dog mushing in the community. They also discussed their attachment, including their connection to place and their pride in being a member of the community. This sense of pride is connected with knowledge of the Koyukon language and culture, considering that many Alaska Native languages are threatened of extinction (Evans Smith et al., 2018). Youth also expressed an attachment to the mushing community, which extends outside of the village. This high school girl expresses her attachment to Huslia and the local culture through the preservation of language and traditions:..

JesCynthia David se’ooze, dehoon Denaakk’e helde Hedo’ketlno seeznee. Ts’aaateydenaadekk’ohn Dehn hut’aanah eslaanh. My name is JesCynthia David while in Denaakk’e they call me Hedo’ketlno, and I am of the Huslia people.... I especially love how we are still doing this, sure we now have snow-gos and boats, and cell phone service, but we still have races, KRC’S, potlatches and cover dishes, things that keep our culture alive.

### 3.7. Symbolic capital

Symbolic social capital can be identified through the youth’s strong sense of connection with the late George Attla and other successful community mushers. George Attla was a legendary dog musher from Huslia, who passed away in 2015. Symbolic capital was also demonstrated in the youth’s connections to other mushers and Elders who are respected Huslia community members. Spiritual elements of symbolic capital also emerged, often related to the spiritual relations that Athabascan have with nature and animals, and intertwined with the value of restoring pride lost due to colonization. The youth understood the importance of restoring connections to nature, wild and domestic animals that have played an important and symbolic role in Koyukon spirituality (Nelson, 1983). Many cultural activities also have ties to dog mushing as a mode of transportation for winter subsistence. The youth reported doing well in sled dog races and understanding the importance of respecting their Elders and the dogs, highlighting a symbolic aspect of cultural capital. Spirituality, respect for animals and respect for the land and nature are highlighted in this quote from a high school girl:..

I love running dogs and racing in competitions. During competitions there is often a ton on your mind and it is easy to feel anxious. Even with all these feeling, I love how dogs have almost a magical power to give you a calming peace. While running dogs I find clarity, it’s a period of time without noise and voices.

### 3.8. Impact on health and wellbeing

The students’ stories illustrated the impacts of the program on wellness, showing how it kept them busy with kennel and Elders’ visits, promoted physical activity, increased pride, self-esteem, love and respect, nurtured hard work, discipline and resilience, and improved academic and life skills. The focus on taking care of dogs’ health reminded the youth to take care of their own health. The program also helped youth build relationships with adults, Elders and peers, community unity, and awareness of animals and nature. It facilitated a sense of belonging and place attachment, which has also been associated with

mental health promotion (Marques et al., 2018). The program also helped connect youth to their cultural traditions, and their ancestors. This sense of cultural continuity and connection is important for health and wellness (Chandler et al., 2003). It also nurtured optimism and visions of a positive future. This middle school girl highlights how dogs help youth see their future positively:

Dogs have educated me with obedience, love, loyalty, they gave me company, taught me how to get right back up, they made me tougher and smarter. Dogs are in our culture, they are our family. I believe we all grew up to love dogs, they are our past, our present, and for most of us, our future.

### 3.9. Adults focus groups

The analysis of the adults focus groups corroborated and expanded on the findings from the youth data. Community members emphasized how the program helped youth build pride in themselves, their culture, and their community. It facilitated a sense of belonging and identity. Working together to care for dogs taught discipline and responsibility, values which translated into future endeavors and life skills. The Elders and mushers were role models whose resilience inspired the youth to persevere through life challenges. The program promoted social connectedness, as well as respect and connectedness with the land and animals. Relationships with dogs brought the community together, and brought youth closer to adults and Elders by connecting them around a common interest, facilitating communication across generations. Community members also expressed satisfaction with the research project’s effects on the students, and were proud of the stories their children had produced during the project.

## 4. Discussion

Our findings show how the FAYSDP, an education and wellness program based on Athabascan traditional activities, developed and supported by community members, is likely to have a positive impact on health and wellbeing in Huslia. The program fostered relationships with Elders, adults, other youth and animals, as well as community unity, with common goals centered on local cultural values. This is consistent with recommendations of strength based Indigenous behavioral health research which include: building community partnerships and capacity, developing connections for the youth, promoting the intergenerational transmission of traditional knowledge and values, and combining Indigenous and academic perspectives (Hackett et al., 2016; Walters et al., 2020; Whitesell et al., 2020).

### 4.1. Impact on capitals

We found that the FAYSDP helped youth participants, as well as the community as a whole, acquire social, cultural and symbolic capital. Social capital gains were mostly through developing intergenerational social networks including Elders, increasing social cohesion in the community, as well as giving the youth a sense of belonging and attachment to Huslia. The program also fostered cultural capital among youth, mostly in its embodied form by building life skills that will be beneficial to them in the future. This project provided an opportunity to exemplify symbolic capital in an isolated Alaska Native community, with pride and recognition and spirituality being among its dominant elements.

These representations of capitals are also in line with the literature on social and cultural capital among Indigenous populations. Particularly, our work confirms and responds to a need to characterize social and cultural capital more specifically for underserved or minority communities in their cultural context, in contrast with the early use of the concept promoting Western societies’ viewpoints and ignoring local

cultures (Stewart-Withers & O'Brien, 2006). The importance of non-human, material and immaterial relations for wellbeing, i.e., with animals and nature that we found, has also been emphasized in recent research (Doucet, 2020). An important representation of cultural capital revealed in our study is resilience, or the ability to survive and thrive in a harsh environment. Resilience has been part of Indigenous people's lives and associated with their culture for millennia (Wexler, 2014). However, it takes a new meaning in the context of colonization and globalization where Indigenous populations had to adapt to rapid social changes (Rasmus, Allen et al., 2014; Wexler et al., 2014). Connection to Indigenous cultural traditions and values, an open and positive frame of mind, and strong social and family relationships were important resources for healing from the negative effects of historical trauma and rapid cultural change (Rivkin et al., 2019). Such connections to culture, hopeful perspectives, and positive relationships were also important sources of resilience in the current study.

Athabascan spirituality and wellbeing are grounded in material and immaterial worlds, including nature, animals, people and spirits around them. Richard Nelson, who documented Koyukon Athabascan life in Huslia, Alaska wrote:

Traditional Koyukon people live in a world that watches, in a forest of eyes. A person moving through nature – however wild, remote, even desolate the place may be – is never truly alone. The surroundings are aware, sensate, personified. They feel. They can be offended. And they must, at every moment, be treated with proper respect. All things in nature have a special kind of life, something unknown to contemporary Euro-Americans, something powerful (Nelson, 1983, p. 14).

Spirituality is a fundamental element of hunting, gathering, and utilizing natural resources. The natural and spirit worlds cannot be separated in an Athabascan thought process because they perceive nature to be dictated and manipulated by an elaborate system of supernatural concepts. Furthermore, behavior towards nature is governed by many supernatural rules, and following or disobeying rules will dictate the success and wellbeing of humans (Nelson, 1983). Nelson noted these spiritual beliefs and connections to the natural world are still prominent in contemporary Athabascan societies. Our data confirmed this with a high degree of co-occurrence between themes of spirituality and practice of Native traditions.

The importance of symbolic capital related to pride and spirituality in our project is in line with Bourdieu's early work with the Kabyle people which led him to identify the symbolic dimension of capitals in a colonial context (Bourdieu, 1958). The connection is in the attempt to understand how traditional social structures were affected by rapid social changes imposed by colonization (Calhoun, 2006). However, our study focuses on capitals from the youth's perspectives and attempts to better understand how ancestral forms of capital lost through colonization can be restored to facilitate wellness. In contrast, Bourdieu's work focused on how social inequities are perpetuated by actors to conserve their position of power. In the FAYSDP program, symbolic capital is also represented by the fame of its creator, George Atla who was one of the first inductees in the Alaska Sports Hall of Fame in 2007 (George Atla, The Huslia Husler, 2007).

#### 4.2. Potential health and wellbeing benefits

The potential health benefits of these capital gains seem to occur largely in the mental health and community wellbeing domains. Youth discussed how the program nurtured confidence in their skills and abilities, a sense of pride, feelings of hope, and a vision of a positive future. Having a positive vision of the future and a sense of self efficacy are elements of reasons for life, a protective factor against diseases of despair, particularly suicide (Allen et al., 2019).

In addition to the gains stemming from the FAYSDP itself, digital

stories can be hope kits to serve as a reminder of one's strengths and support, thus promoting youth development and wellness (Wexler et al., 2013). Creating and sharing digital stories reminded youth of the support and hope in their culture and community. It also built community interest in the use of digital storytelling as a tool for intergenerational connections, fostering capacity-building as more community members became digital story facilitators. Likewise, engaging the community in a CBPR research process has its own potential benefits related to social and cultural capital. For example, building research capacity in the community can help adults in obtaining jobs. Also, developing connections between high school students and University staff may improve college academic success among a population where it is historically low (Taylor et al., 2017).

#### 4.3. Implications

The findings of our study show that both the youth participants and community members perceived a positive impact of the FAYSDP related to gains in capitals. This suggests that increasing cultural, social, and symbolic capital could be an important goal for developing youth wellbeing promotion programs, particularly in Indigenous or other culturally specific settings. Photovoice and digital storytelling were methods well accepted by community members, which allowed vulnerable youth to express their perspectives of the program. The methods facilitate a way to organically document the more holistic ways of being and doing found among many Indigenous communities. Photovoice and digital storytelling provide useful and engaging assessment tools for wellbeing promotion programs, as well as other community-based programs. They are also helpful in community dissemination of findings. These culturally congruent visual and narrative methodologies can thus serve as valuable additions to a community-based intervention, evaluation and dissemination toolbox.

#### 4.4. Strengths, limitations and future directions

The originality of our work has been to bridge capitals theory with Indigenous viewpoints focused on the restoration of cultural values and practices for wellness promotion. We found that FAYSDP activities reinforced aspect of capitals and Athabascan cultural values. In many cases, the youth associated wellbeing with living in harmony with animals and the environment. Human and animal health and the environment were all intricately interconnected in the youth's stories. This principle has been formalized in the One Health paradigm (Hueffer et al., 2019; Ruscio et al., 2015). Wellbeing is tied with connections to other people, to the land, to animals, and to cultural traditions and values. Our study suggests that mental health interventions may benefit from a One Health approach through the promotion of interrelated capitals in the human, animal and environmental domains as others have suggested for animal-assisted interventions (Hediger et al., 2019).

Limitations of our study include a small sample size and the fact that we only looked at one cultural group of Alaska Native people exposed to a specific intervention. This makes it difficult to generalize our results to the broader population of American Indians-Alaska Natives or other cultures. However, the prominence of holistic understandings of wellbeing in most Indigenous cultures mitigates that limitation. This study helps give voice to Indigenous experiences of social and cultural capital supported by a culturally-based program. However, additional research building from Indigenous conceptualizations of capitals is critical to advance understandings that transcend Western conceptions. In addition, our findings can inform the process of designing new or adapting existing strength-based interventions in ways that build on community cultural and social capitals, acknowledging that what constitutes a gain in a certain form of capital could differ from one culture to another. The current study utilized engaging methodologies to understand youth and community perspectives on elements of social and cultural capital fostered by a culturally-based program, however, it did not examine

quantitative changes in capital or health outcomes. Another limitation of this work is that it evaluates protective factors, but not health outcomes directly, so that we only show potential health benefits.

Future work should aim at improving the understanding of the different forms of capital in youth in general since it has been understudied. It should also include formalizing the process of operationalizing cultural strengths into capital promoting components and developing culturally specific measures of cultural, social and symbolic capital. Assessing and promoting symbolic capital is of particular interest since it has received little attention in health interventions.

#### 4.5. Conclusion

In this article, we presented a case study showing that a locally developed intervention aimed at reinforcing cultural traditions and practices seems to also promote social, cultural and symbolic capital and tends to promote wellbeing and brighter ways of thinking about the future among community youth. The processes exposed in this study could be useful to develop measures to guide the development and assessment of culturally-based health promoting interventions.

#### CRediT authorship contribution statement

**Jacques Philip:** Conceptualization, Methodology, Investigation, Formal analysis, Writing – original draft, Project administration. **Janessa Newman:** Methodology, Formal analysis, Investigation, Writing – original draft, Writing – review & editing. **Joe Bifelt:** Methodology, Formal analysis, Investigation, Writing – review & editing. **Cathy Brooks:** Methodology, Formal analysis, Investigation, Writing – original draft, Writing – review & editing. **Inna Rivkin:** Conceptualization, Methodology, Formal analysis, Investigation, Writing – original draft, Writing – review & editing.

#### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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