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How Academic Experiences and Educational Aspirations Relate to Well-Being and Health among Indigenous Sami Youth in Northern Norway

A Qualitative Approach

ABSTRACT Increasingly, education occupies the lives of Indigenous adolescents worldwide. This qualitative study is part of the project “Circumpolar Indigenous Pathways to Adulthood” (CIPA), where the overall aim was to identify young people’s stressors in five circumpolar sites, and the resilience processes that safeguard transition into adulthood (Allen *et al.* 2014). The present study explores the everyday lives of young Sami in Northern Norway regarding educational demands and plans, related challenges and stressors and their impact on well-being, health and cultural continuity. Semi-structured interviews were conducted in 2010 (N=22) with reindeer husbandry affiliation (RH: 11) and non-reindeer husbandry affiliation (NRH: 11) adolescents, aged 13–19 (females: 12). School well-being was divided into educational factors (culture-based teaching, e.g. Sami handicraft and outdoor practices), environmental factors (e.g. school canteen) and social factors (e.g. caring teachers), while challenges and stressors were educational (e.g. getting good marks), environmental (e.g. noise) and social (e.g. bullying). Lower secondary school pupils called for more tradition-based teaching. Educational aspirations were highest among females and NRH males. RH males generally planned to continue their traditional lifestyle and showed the strongest place attachment. We also address the maintenance of cultural continuity, which is important for the well-being and health of Indigenous youth.

KEYWORDS adolescents, Arctic Norway, education, health, Indigenous, reindeer husbandry, well-being, cultural continuity, community resilience

Introduction

There is a lack of qualitative research on Sami adolescents living in Norway, and their contemporary life in relation to school experiences, cultural continuity and adaptation to new demands. This study is part of the collaborative circumpolar research project “Circumpolar Indigenous Pathways to Adulthood” (CIPA) (Allen *et al.* 2014). The aim of the present study was to enhance understanding of the contemporary daily life of both young non-reindeer husbandry (NRH) and reindeer husbandry (RH) Indigenous Sami approaching adulthood in a Sami majority context in Norway, with regard to their educational aspirations and future plans, as well as related challenges, stressors and resilience and the impact of these on well-being, health and cultural continuity.

Cultural Continuity, Well-Being and Health of Indigenous Youth

Cultural continuity is considered an important dimension of community resilience and is associated with well-being and better mental health for Indigenous peoples. Oster *et al.* (2014: 3) used “being who we are” as an explanation of cultural continuity, while Chandler & Lalonde (2008: 222) defined cultural continuity as a “workable personal or collective [...] mechanism” that reinforces “responsible ownership of a past and hopeful commitment to the future.” Antonovsky (1979) highlights individuals’ need to feel that events are not totally unexpected and unusual, but understandable and structured, with a sense of continuity and connection.

The preservation of the native language and, in this case, also of the traditional livelihood which includes traditional activities and attachment to the native land, are potential resilience factors and can strongly influence the mental health of Indigenous people, as stated in earlier research (Kirmayer *et al.* 2009; Fleming & Ledogar 2008; Bals *et al.* 2011). Ethnocultural factors, such as cultural activities, ethnic pride and native language were found to be potential protective factors against mental health problems among young Sami (Bals *et al.* 2011). Self-government, land claims, education, health, cultural facilities and native language facilitation all contribute to cultural continuity and have been found to enhance mental (e.g. lower suicide rates) and physical health (e.g. less diabetes) in Canadian Indigenous communities (Chandler & Lalonde 1998). Therefore, cultural continuity in Indigenous communities may be considered a broader determinant of health (Kirmayer *et al.* 2000; Knibb-Lamouche 2012). A useful definition of community/cultural resilience is “the capacity of systems to maintain similar structure and function, despite assault and perturbations” (Allen *et al.* 2014: 607).

Formal Education

Daily life for Arctic Indigenous adolescents is very different than it was for their ancestors, particularly regarding schooling and education. While schooling for Sami in the early twentieth century, as reported by the first Sami author Johan Turi¹ (2012), was a few weeks each year for five years, formal education has today become considerably more important. Sami youth, like Indigenous youth worldwide, spend most of their time at school, reducing their opportunities to participate in traditional practices such as reindeer herding (Nystad 2007). Research on formal education for Sami youth has been concerned with the content and implementation of the curriculum and with use of the Sami language (e.g. Hirvonen 2004; Helander 2012; Keskitalo & Määttä 2011). There have been

several quantitative studies tapping different topics, for example various school-related issues such as educational skills (e.g. good marks), school type (vocational vs. general studies), positive attitudes toward schooling (school satisfaction), school attendance (e.g. drop-outs) and health parameters (e.g. smoking, hyperactivity problems, behaviour problems, musculoskeletal problems) (e.g. Bania *et al.* 2015; Bania *et al.* 2019; Spein *et al.* 2004). Sami and Norwegian upper secondary students attending vocational training had higher regular smoking rates than peers attending general studies (Spein *et al.* 2004). Others, like Bania *et al.* (2015), using baseline data from the Norwegian Arctic Adolescent Health Study (NAAHS) in 2003–2005 among tenth-graders, found higher average marks to be associated with higher educational aspirations. In addition, males and Sami also showed the lowest aspirations.

Data from the quantitative North Norwegian Youth Study (NNYS) in the mid-1990s revealed significantly lower school satisfaction (less school well-being) among 15 to 19-year-old Sami high school students (20%) than among non-Sami (13%), but there were no gender differences among Sami students (Kvernmo *et al.* 2003; Spein *et al.* 2004). In addition, Sami youth living in the Sami highland (Sami-dominated areas) have been found to hold more negative school attitudes (Kvernmo *et al.* 2003). More recently published cross-sectional data from the annual ongoing Norwegian youth study *Ungdata* (Bakken 2019), show school well-being/satisfaction for eighth–tenth-graders to be lower in the study community (53%) than the national Norwegian average (65%), and lower than the regional average for Northern Norway (56%). School satisfaction might have an impact on completion of upper secondary school. Findings from the NAAHS, a quantitative cross-sectional study including 405 Sami tenth-grade students in 2003–2005, revealed no significant ethnic differences in non-completion of upper secondary school between Sami (41.3%) and non-Sami (36.8%) adolescents when controlling for parental socioeconomic status, religion (Læstadianism), reading and writing difficulties and average marks (Bania *et al.* 2016). Generally, there were lower completion rates among Sami (58.4%) and non-Sami (63.5%) tenth-grade male students in the univariate analysis, but these were insignificant in the adjusted analysis. In summary, across ethnicity, males residing in remote areas of Northern Norway were less likely to complete upper secondary school (Bania *et al.* 2016). A recent paper based on baseline data from the NAAHS (2003–2005), longitudinally linked to the National Education Database, found that Sami males were significantly more likely after 8–10 years (23- to 25-year-olds) not to be engaged in education, employment or training (Bania *et al.* 2019).

Historically, schooling for Sami, as for many other Indigenous people, especially boarding schools, has been the main venue for assimilation and has kept children and adolescents away from their parents and everyday family life for most of the year (Minde 2005; Huuki & Juutilainen 2016; Rasmus 2008). However, placing Finnish Sami pupils in Sami families (not boarding schools) was more likely to ensure their cultural continuity (see Huuki & Juutilainen 2016). A Canadian review by Wiik *et al.* (2017) revealed negative outcomes for Indigenous well-being and health in boarding schools, such as poorer mental health and emotional well-being, and some of the papers identify intergenerational effects.

The first Sami author Turi highlighted the colonizing influence of schooling as early as one hundred years ago (Turi 2012: 30), stating: “And their nature [children going to school] is changed as well: their Sámi nature is lost and they acquire a settler’s [colonizer’s] nature instead.” Western values, content and practices continue to dominate teaching in Sami schools in Norway (e.g. Hirvonen 2004; Keskitalo & Määttä 2011; Bæck

2015). The curriculum has been somewhat irrelevant to Sami people, for instance reindeer herders, which may be one reason for lower school motivation. Further, a reasonable assumption is that parents' and grandparents' negative experiences from their own school days, especially from boarding schools, might have an intergenerational effect, by leading to less school support and more negative attitudes towards schooling (Boine *et al.* 2011). Findings from the NAAHS revealed that adolescents whose fathers worked in primary industry tended to have lower educational aspirations (Bania *et al.* 2015).

Education has become important and the time spent at school has increased. Studies have revealed that both the social and physical school environment affect Indigenous adolescents' well-being and health (e.g. Jamal *et al.* 2013). Positive school experiences (supportive peers, positive teachers) potentially influence academic success (Fleming & Ledogar 2008). Moreover, a healthy social school environment may positively affect well-being and health and decrease school absence (e.g. Turunen *et al.* 2014; Maxwell 2016), while bullying is a serious threat to youth well-being and health (Olweus 1995; Smokowski & Kopasz 2005; Jørgensen 2018).

Considering the lack of qualitative studies of the daily lives of Sami pupils/adolescents, we wanted to examine on an individual level Sami pupils' current schooling experiences and future plans. The specific research themes and selected questions included in the Norwegian part of the CIPA are presented in Table 1. Our main research themes included educational experiences, aspirations and future plans. On an individual level, this study considers Sami pupils' current schooling and future plans, and potential challenges or stressors that could impact their well-being and health. Further, we discuss the potential impact of schooling and future plans on cultural continuity and resilience at the community level.

Context. A Sami Majority Municipality in Norway

The adolescents in this study live in a Sami majority community. Their family background was divided into RH or NRH-affiliated. Reindeer husbandry (RH) is a traditional family, community and land-based livelihood. It still holds a strong cultural and economic position, engaging about 40–50% of the inhabitants in the community under study. Reindeer husbandry (Sametinget 2016a: 6) is regarded as the cornerstone of the Sami culture; along with various subsistence activities (e.g. berry picking, fishing and hunting), it carries cultural expressions of Sami identity (Sametinget 2016b: 42), and has through history adapted to changes in society. Adolescents with family ties to reindeer husbandry have duties and are involved in traditional cultural practices (Nystad *et al.* 2014). The native language has a strong position in this municipality; about 90% of the inhabitants speak Sami. The Sami language is promoted in all kindergartens and used as the medium of instruction in primary and secondary schools, and in the Sámi University of Applied Sciences, which is located in the community and offers bachelor's and master's programmes, for example in teacher training, journalism, *duodji* (Sami handicraft), reindeer husbandry and Sami language studies. The Sami curriculum has been used in lower secondary schools since 1997 and is intended to provide high-quality teaching based on Sami language, culture and social life and thus enhance the development of Sami ethnic identity (Udir 2007: 1–2). Phinney & Ong (2007: 279) emphasize that “the core of ethnic identity is a sense of self as a group member that develops over time through an active process of investigation, learning, and commitment.” However, in the Office of the Auditor General's opinion (2019), there are significant weaknesses in the content of the

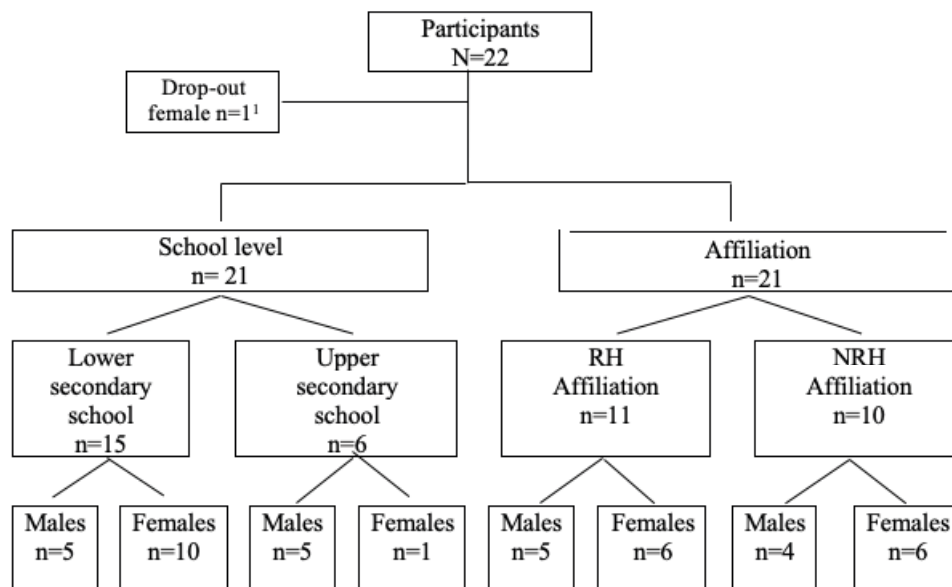
Sami education programme. Moreover, there is a lack of research showing the potential positive outcomes for Sami students of education based on Sami curricula. However, the Sami curricula may play a significant role in building cultural resilience and contributing to the community by maintaining its distinctiveness and thereby its cultural heritage. Ethnic pride and a strong sense of ethnic identity are influenced and partly determined by Sami language fluency and living in a Sami majority area (Nystad *et al.* 2017). Fluency in Sami thus represents a major vehicle of cultural continuity in a predominantly Sami area.

Indigenous communities often struggle financially. The study community has been one of the municipalities with the lowest average income in Norway (Kommuneprofilen, no 2017).

Study Methodology, Design and Participants

This study was part of a circumpolar resilience study, Circumpolar Indigenous Pathways to Adulthood (CIPA), conducted in five circumpolar sites (Allen *et al.* 2014). Interviews were conducted in 2010, with 22 Sami 13 to 19-year-olds (21 pupils, one school dropout, 12 females), of whom 11 (5 females) were from RH families (see Fig. 1). All 22 participants reported Sami self-identification, and 86.3% (n=17) had Sami as their first language. Fifteen participants had a mono-ethnic Sami background, while seven had a multi-ethnic background. Sample characteristics with regard to gender, grade level and reindeer husbandry affiliation are presented in Fig. 1. Participants were recruited using written and oral information in Sami and Norwegian about the project in schools, on local radio and in newspapers. The research protocol was developed in collaboration with the CIPA international steering group. A local representative steering committee (e.g. two students and one teacher) assisted in recruiting participants in schools and adding the site-specific components to the international common research protocol. A more detailed

Fig. 1. Sample characteristics by school level and affiliation of the Norwegian part of the CIPA study 2010



¹ One school drop-out, a female 17 years old with non-reindeer husbandry affiliation
RH = reindeer husbandry, NRH = non-reindeer husbandry

description of both the international and Norwegian part of the CIPA study may be found elsewhere (Ulturgasheva *et al.* 2011; Allen *et al.* 2014; Nystad *et al.* 2014; Nystad *et al.* 2017). The Norwegian part of the CIPA received prior approval from the Norwegian Regional Committees for Medical and Health Research Ethics (REC) 2009/729-2. Voluntary participation was emphasized and participants were given the option to withdraw at any time during the study. For participants younger than 16 years (the age of consent in Norway), informed consent was obtained from parents or guardians.

Awareness of accepted research and ethical guidelines necessitated attention to the young participants' limits and needs, especially those in early adolescence, protection of their integrity and ethical and responsible use of the information.

Interview Guideline

Table 1 shows the main research themes and questions. The adolescents were encouraged to tell about their activities the day before the interview, to provide a life-history timeline, and an outline of issues related to, for example, school, future educational plans and aspirations (Table 1).

Table 1. Research themes and selected questions included in the present paper

SCHOOL

What are the biggest problems young people have with school?

What about you?

How do you deal with such problems?

What would make school better?

Have you ever avoided going to school? Why?

What kinds of things have you learned in school that you think will help you in the future?

If the person is not attending school: Why aren't you in school? What would help you go back to school?

What could we do more of to keep kids in school?

SAMI CULTURE

Tell me about what being Sami means to you.

Do you feel like a Sami?

What parts of Sami traditional knowledge do you appreciate most? Is anybody teaching you about traditional knowledge? Can you be specific about the things you have learned?

When you go outside the community to big Norwegian towns, do you tell people you are Sami, or do you try to hide it? Have you sometimes felt ashamed of being a Sami?

Have you been proud of being a Sami?

What's important to you about your traditional culture? Who do you learn about your culture from?

FUTURE HOPES AND PLANS

Tell me what you think your future will be like.

What do you hope for your future? Has anyone talked with you about this?

Who do you know that has a life like the one you describe? Tell me about him or her.

What do you expect of your future? Has anyone talked with you about this? Please tell me more. Do you see yourself staying in the community or moving away? Why?

What should young people know to become adults around here?

Limitations

The interview protocol was limited by the lack of specific questions on how the adolescents themselves thought traditional and modern demands (e.g. school issues) affected their well-being and health. The qualitative approach and small number of participants mean that the findings are not generalizable, but may reveal deep insights into contextual influences on resilience. The results must be interpreted with caution, as all upper secondary students reporting reindeer husbandry affiliation (n=6) were interviewed in May, a very appealing time of year for reindeer herders, light day and night, calving and migration from the Sami highland to the coastal area. By contrast, in May, school is characterized by exams and tests. This may have influenced some statements, such as finding school boring.

Another issue to be aware of while interpreting the data is the age-related gender bias, as females were overrepresented among participants in lower secondary school, but underrepresented in upper secondary school (5 out of 6 were males, see Fig. 1).

Conducting qualitative research in the researcher's own community might have meant that implicit issues were not made explicit. The community membership and ethnic affiliation of the first author might have influenced the information shared. However, the research process benefitted from the researcher's cultural knowledge and Sami language fluency.

The studies, for example the two main quantitative studies we have referred to (NNYS and NAAHS), had different definitions of Sami ethnicity, which might have had implications for the results.

Interview Process and Data Analysis

The participants were interviewed twice by the first author (except one female, No. 7), either in Sami (n=17) or Norwegian (n=5). The interviews were semi-structured with open-ended questions, providing narrative opportunities (Riessman 2008). All the interviews were taped and transcribed by the first author, and translated into English by a translator who was familiar with Sami culture and reindeer husbandry. The data were analysed using modified grounded theory (MGT). As a member of an ethnic Sami community, the first author had knowledge of the participants' cultural background and everyday lives at school and in the community. In addition, the Sami/Norwegian bilingualism of the first author was also highly advantageous in the interpretation and analysis of the data. The interview and transcription processes required the researcher to listen to and read the raw data several times, which was helpful in the inductive development of codes by identifying themes and comparing those across transcripts. The coding process itself also led to active involvement in the data and forced the researcher to think in new ways. According to Charmaz (2006), coding requires decisions about the codes that make the most analytic sense. The data were coded with initial codes, followed by decisions regarding the choice of the most analytic codes. For instance, adolescents' well-being and challenges in school were divided into three categories and coded as social, environmental and academic challenges and well-being (see Table 2). Considering the small number of previous qualitative studies of Sami students' school-related challenges and well-being, the MGT culturally sensitive bottom-up method was beneficial in identifying themes.

Results

Based on the qualitative data analysis, the following themes emerged: educational experiences, aspirations and future plans, contemporary challenges and stressors, resilience

strategies, well-being and health, and their possible impact on cultural continuity. Summarized data are coded in Tables 2 and 3.

The School Setting. Challenges/Stressors and Well-Being

As shown in Table 2, participants' school challenges and stressors and their well-being were related to educational issues (struggling with schoolwork, getting good marks, qualified and supportive teachers), environmental matters (e.g. classroom noise, poor indoor climate, having a school canteen) and social factors (e.g. social interactions with friends, socially supportive teachers, bullying, peer pressure to take snuff).

"It's Boring to Sit in Class all Day"

The participants reported challenges and stressors, but also well-being linked to educational satisfaction. Some had difficulty with marks or subjects, while others mentioned subjects they liked or considered important; several pointed out the extent to which traditional knowledge was successfully taught in school. Some final-year pupils reported feeling pressure to get good marks, such as this 19-year-old RH female: "I've tried to do my best even during difficult times when I felt like I'd given up on school completely." One 18-year-old RH male considered history, English and Norwegian to be important subjects. He specified: "We have to know Norwegian when we arrive at our summer grazing land." He expressed a fear of losing his language and becoming assimilated: "We may all become Norwegian when we live among Norwegians. It might not take long before we're all Norwegians." Several pointed out the lack of variation in lessons, while others mentioned boredom and being tired of school. Six participants (four females) found school boring, for example due to learning difficulties and lack of friends during breaks (Table 2).

Final-year pupils (tenth-graders) in lower secondary had difficulty with subjects and achieving good marks. One 18-year-old male stated: "It's boring to sit in class all day." More variety in lessons and more practical classes were called for. The reindeer husbandry courses in upper secondary offer apprenticeship programmes after twelfth grade, which the pupils appreciated. Another challenge, as one final-year female student in upper secondary school noted, was the lack of qualified teachers:

The biggest problem at school is to get qualified teachers in some subjects. For example, we have video teaching in history, chemistry and Norwegian language from another upper secondary school. I heard that when they advertise for teachers, they require the applicant to be fluent in Sami language or willing to learn Sami. If I didn't know the Sami language and I was looking for jobs, then this wouldn't be the first job I applied for.

Traditional knowledge was taught at school, but some pupils expressed dissatisfaction with this. One 15-year-old RH female stated: "I learned Sami handicraft, for example how to sew a *luhkka* [a Sami cape]." Others reported learning how to slaughter a reindeer at school, but most traditional knowledge came from their parents, grandparents and other family members, as stated by one 13-year-old female: "My grandparents and my parents sometimes teach me about culture and traditions." One 15-year-old RH female was dissatisfied with the traditional knowledge taught at school:

Nothing is taught about traditional Sami culture in school. We've asked if we could learn how to sew Sami traditional winter shoes made of reindeer leg hide, but we weren't allowed to. We had to sew pencil cases made of factory leather.

One 13-year-old NRH male noted:

We learn, for example, how to set up a *lavvu* [Sami tent] at the school seafarer training camp. Our Sami teacher is going to teach us about reindeer. We're going to slaughter. That'll be fun. We're going to catch reindeer and make blood sausages.

Although the course included several weeks of practical learning, one 18-year-old RH male was not satisfied:

These days we only have one month in the field and I think it should be more. I think you learn more in the field when you're herding reindeer than in the classroom.

"Pupils Were Noisy and Silly"

The second aspect, environmental factors, included noise in classrooms or corridors, poor indoor climate due to old buildings, while access to a school canteen was considered to promote environmental well-being. Some reported getting headaches because of noise in the corridor and classroom, especially with substitute teachers, as one 15-year-old NRH female stated: "We had a substitute teacher, very young, and the pupils were noisy and silly." Similarly, a 15-year-old NRH female reported: "There's so much noise in the classroom—so I can't concentrate." A 13-year-old NRH male reported no social or academic challenges related to school, only problems related to poor environmental well-being: "I have asthma, I react to something in the classroom, and my medication doesn't work." The opportunity to have meals in the school canteen was viewed positively, as one 13-year-old NRH male stated: "They have good food in the canteen, sometimes hot meals too. I go there every day."

The third aspect, social factors at school, included socializing with friends, caring teachers working to combat bullying and harassment, but also bullying, rumours, exclusion and peer pressure. One 15-year-old RH female reflected that the good thing about school was the supportive teachers: "They try to prevent bullying. They try to get all the pupils to be friends with everyone." The positive experiences of the social environment were mainly that teachers tried to prevent harassment, as one female 15-year-old RH female stated: "I think the teachers are doing a very good job. They solve problems like harassment. They talk to the parents as well as the pupils." She also reported rumours among pupils: "There are rumours about people. They sit in the corridor and talk badly about people. I don't like that." She had also experienced bullying in primary school and explained how it had influenced her self-image:

I was bullied when I was younger. Sometimes I lack self-confidence. I think I can't do anything as they told me I'm no good at things. No point even trying. I need support and confirmation that I can do things.

By contrast, one 18-year-old RH-male reported: "I haven't experienced bullying. Among my friends we have humour, sometimes very coarse. Some people might think we're bullying each other. I see it as teasing." A 13-year-old male NRH reported:

I tease. I don't bully. Sometimes I've made comments. I'm not usually the one who starts it. It's hard not to get my own back when I've been teased. Not to say something back or make a comment. [...] To be completely honest, I did bully a boy once. I was bullied myself in first grade.

He confirmed this by saying:

In primary school (grades 1–7) I experienced bullying a lot. A fifth-grader bullied me, threatened me. It lasted half of first grade and happened during breaks. I was afraid. He threatened to kill me. He knew I'd tell the teacher and I just got more threats. After school, I usually went straight to the after-school programme. Bullying isn't allowed there; you can get into lots of trouble for bullying.

In upper secondary school, pupils were more diligent than in the lower grades and less bullying was experienced. Another 15-year-old NRH female reported:

Experiencing bullying every day makes you uncertain about yourself. Your self-esteem decreases. It does something to a person. [...] I was like a lone wolf, in fact [...] The pupils here are very good at hiding bullying. It's a small school; you soon get connected with people.

One 13-year-old RH female argued that one has to be stubborn and speak up against bullies:

Last year something sad happened. One of my friends was ganged up on in class. There were two girls in my class, they tried to bully me but I'm quite tough and I have a lot of friends so they didn't get anywhere with it. I always speak my mind directly and if I get angry, then I can tell people off quite harshly. The two girls got angry when I didn't care about them and they started to harass another girl and she's not the kind of girl that's used to speaking up. They started to harass her about minor things, like, for example, when she asked them if she could join them in playing football and they answered: "It's a game for two only." Another example of how they tyrannized her was interrupting her when she was talking.

The same 13-year-old RH female went on to explain how bullying takes place between girls:

Girls bully by glaring in a nasty way or answering rudely and by spreading malicious rumours about someone to others. The girl being bullied withdrew and started to sit by herself. Her behaviour changed completely and I felt sad about it.

One 15-year-old RH female pointed out the importance of having a social advisor and nurses at school. "They solve problems such as bullying and harassment. They know us better than our class teacher and they help us to choose what to study in future."

Table 2. Educational, environmental and social stressors and well-being related to the school setting by gender and age group/grade level (N=22)

Participant number	Educational self-report	Coded as: Stressors vs. well-being	Environmental self-report	Coded as: Stressors vs. well-being	Social self-report	Coded as: Stressors vs. well-being
Females (n=12)						
Lower secondary (13–15 year) students (n=10)						
1 ¹	Favourite subject(s): Sami Handicraft, Food and Health, Economics, Physical Education Challenge(s): Bored at school when she does not understand what is going on in lessons Lack of information presented to pupils	Bored Educational stressors	Caring teachers: Social support and protection against bullying	Environmental well-being	Friends Rumours	Social well-being Mental stressors
2	Favourite subject(s): Likes all subjects Sami handicraft gives opportunity to learn Sami traditional skills	Educational well-being	Likes the canteen at school Noise in the classroom Old school building	Environmental well-being and stressors	Friends	Social well-being
3 ¹	Favourite activities: Practical lessons, projects, laboratory tests, and screen-based activities Inspired by school Challenge(s): Dislikes reading textbooks Boring if the instructions are not good	Educational well-being	- ² Old school building	Environmental well-being	Bullying sometimes	Mental stressors
4	Likes outdoor activities at school Challenge(s): Struggles with some subjects	Educational stressors	Caring teachers: Protecting against bullying	Environmental well-being	Bullying (hidden) Exclusion among pupils Easy to socialize	Mental stressors Social well-being
5 ¹	Favourite subject(s): Sami Handicraft, convenient to have the possibility to speak Sami at school Challenge(s): Tries to get good marks	Educational well-being Challenges	Environmental stressors	Environmental well-being Health challenges	Friends	Social well-being

6	Favourite subject(s): Sami Handicraft, Social Science and Music Challenge(s): Long days in school, lack of variation in lessons—only using textbooks	Bored Monotonous learning methods	Better than primary school	Environmental well-being	Rumours Bullying Peer pressure to drink and smoke	Mental stressors Peer pressure
7 ^{1,5}	Favourite subject(s): Sami Language Challenge(s): In some subjects, school is boring, lack of variation in lessons	Struggling academically Monotonous learning methods	Nothing special worth mentioning about the school environment		Rumours Peer pressure	Mental stressors Peer pressure
8 ¹	Favourite subject(s): Mathematics, Sami Language and Physical Education		Teachers protect pupils from bullying	Environmental well-being	Rumours Peer pressure (to drink in one's leisure time) Likes the breaks	Mental stressors Peer pressure Social well-being
23	Favourite subject(s): All subjects except Mathematics and Science. Challenge(s): Breaks are boring, not so many to hang out with	Educational well-being Bored	Noise in the classroom School canteen	Environmental well-being and stressors	Bullying in primary school	Mental stressors
24	Favourite subject(s): Mathematics, Physical Education, English and Science	Educational well-being	Noise in school corridor during the breaks	Environmental stressors	Bullying	Mental stressors
Upper secondary (16–19 year) students (n=2)						
14 ^{1,2,3}	Challenge(s): Having video lessons for three hours is boring, lack of qualified teachers, boring if the teacher is not qualified	Bored Teachers lacking competence	To have the school in the community is good	Environmental well-being	- ²	
17 ^{3,6}	Favourite subject(s): Sami Handicraft and Social Sciences. Challenge(s): Lack of variation in lessons, skipping school	Monotonous learning methods Skipping school	Lack of school lunch	Poor environmental well-being	- ²	

Males (n=10)						
Lower secondary (13–15 year) students (n=5)						
	Favourite subject(s)	Educational well-being	The canteen at school is good, but wants free lunch at school	Environmental well-being	Bullying Experiences ethnic exclusion	Social stressors
9	Food and Health, Mathematics and Science					
10	Favourite subject(s): Sami Language, Mathematics, Music and Sami Handicraft Challenge(s): Norwegian and English		Canteen Lack of teachers in the corridor during the breaks.	Environmental well-being and stressors	Rumours	Mental stressors
21	Favourite subject(s): Spanish, Social Science and Physical Education Important subject(s): Natural Science, Social Science and Mathematics	Educational well-being	The head protects pupils from bullying The environment in school is giving the pupil health problems (asthma) Canteen	Environmental well-being and stressors	Nothing special to say about the social environment Less bullying than in primary school	Social well-being
22	Important subject(s): Geography, Mathematics, English and Finnish	Educational well-being	-2		Peer pressure to take snuff Bullying Canteen is good to have at school	Peer pressure Mental stressors Social well-being
25 ¹	Important subject(s): Mathematics and Natural Science	Educational well-being	School is okay	Environmental well-being	Peer pressure Bullying at school, but the pupil has not been bullied	Peer pressure Mental stressors

Upper secondary (16–19 year) students (n=5)				
11 ^{1,2,4}	Favourite subject(s): All subjects are fun at times. Important subjects: English, Mathematics and Norwegian. Good to know Sami handicraft. Challenge(s): Mathematics is difficult	Struggling academically	All students are more diligent here in upper secondary level Teachers show respect for students Disobedience to the teachers	Environmental well-being Nice meeting friends Getting tired of school (been at school for 12 years) Hard to get up in the morning Good to meet friends Social well-being Tired of school Bored
12 ^{1,2,4}	Favourite subject(s): Reindeer Herding Important subject(s): Economics Challenge(s): Mathematics is difficult Missing more practical lessons in reindeer herding	Struggling academically	- ²	Social well-being
13 ^{1,2,4}	Favourite subject(s): Sami Handicraft Important subject(s): Economics (to be able to fill in forms such as income tax forms)	Educational well-being	To have a canteen at school is nice Free food at school would be good	Environmental well-being It is boring to sit in class all day long Bored
15 ^{1,2,4}	Favourite subject(s): Sami Handicraft Important subject(s): Economics (to be able to fill in income tax forms) Challenge(s): Sometimes the subjects are boring because of lack of interest	Bored	Good teachers. We have some noise in the classroom as we laugh a lot	Environmental well-being To be with friends Bullying and exclusion are in the pupil's mind the most challenging situations for youth. Social well-being Mental stressors
16 ^{1,2,3}	Favourite subject(s): Mathematics, as the teacher makes good lessons Challenge(s): Tired and fed up sometimes, but feels it is important to go to class	Bored	The teachers have a sense of humour It depends a lot on the teachers if we like the subject or not.	Environmental well-being I meet friends and pupils I know Good to have the school in the community Social well-being

Notes:

¹ Reindeer husbandry affiliated

² Nothing reported

³ General studies

⁴ Vocational studies: reindeer husbandry course

⁵ Participant was interviewed only once

⁶ Drop-out

Future Formal Educational Aspirations and Plans

Table 3 shows educational aspirations and plans among NRH and RH youth by gender. Females (n=11, excluding one dropout) generally reported high educational aspirations, regardless of their affiliation to reindeer husbandry.

"If I Lived Elsewhere, I'd Miss the Community"

Females dreamed of combining education and reindeer husbandry. One 18-year-old RH female stated "I'd like to continue our Sami traditions with reindeer herding and all our other cultural traditions. I'd like to find employment where I can combine work and reindeer herding." Reindeer work was important for her:

If I lived elsewhere, I'd miss the community, but that's because I'm involved in reindeer husbandry. Working with reindeer is what I value most in my life here. I think it's important to live outside this small community for a while and get an education. And I've always prioritized work with reindeer above school work.

Four of the six RH affiliated males were taking a reindeer course in upper secondary school, a combination of schooling and herding, and had vocational aspirations as they planned to continue reindeer herding. They had no plans to pursue further education, but preferred to continue the family's reindeer livelihood and stay in the community (Table 3). Future educational, work and career plans were strongly associated with the adolescents' plan to stay in or return to their local community after their education (n=11). One 18-year-old RH male said: "I'm bound to this place and reindeer herding is the most beautiful life one can live." One 15-year-old RH female said: "I'd have to find out how often I'd travel back home and to find an overall balance in life." A 13-year-old RH female described moving from the community to an unknown city as follows: "Well, it will be sad ... but I'll make it anyway." The argument for staying in the community was the adolescents' connection to and love of reindeer husbandry, as expressed by one 18-year-old RH female: "I just enjoy being part of the work with reindeer." She further argued that a good arrangement for an educated woman would be to keep the relationship to reindeer herding by marriage, referring to one local woman: "She's involved in reindeer husbandry because she's married to a reindeer herder and she has children and a good job." By contrast, those who planned to leave the community dreamt of good jobs, for example a 13-year-old NRH male who wanted:

A job where I earn good money, own a hotel. I don't intend to live here in the community. It's a small place, everybody knows everybody. It's strange to me.

Table 3. Educational aspirations and future plans by gender (N=22)

Parti- pant number	Reindeer hus- bandry (RH) vs. non-rein- deer husbandry (NHR)	Educational aspirations	Coded as:	Place attachment ¹
Females (n=12)				
1	RH	Astronomy or engineering / researcher	High educational aspiration	Unsure
2	NRH	Media and communication/ TV reporter	High educational aspiration	Yes
3	RH	Athletics or phar- macy/ pharmacy owner	High educational aspiration	Yes
4	NRH	Interior architecture/ interior architect	High educational aspiration	No
5	RH	Media and communication/ not reported	High educational aspiration	No
6	NRH	Professional studies in medicine/doctor	High educational aspiration	Unsure
7 ²	NRH	No data available ²		No
8	RH	Athletics Reindeer herding course/not reported	High educational aspiration and voca- tional aspiration	Yes
23	NRH	Bachelor's in Police Studies/police	High educational aspiration	No
24	NRH	Media and communication/ journalist	High educational aspiration	No
14 ^{3,4}	RH	University/master's degree/dentist	High educational aspiration	Yes
17 ⁵	NRH	RH Herding	No current educational plans	No
Males (n=10)				
9	NRH	Business Hotel owner	High educational aspiration	Yes
10	NRH	Music studies/ musician	High educational aspiration	No
21	NRH	Film production studies/director, film maker		Unsure
22	NRH	Media production	High educational aspiration	No
25	RH	RH course or me- chanical studies/ physical work outdoors	Vocational aspiration	Yes

11 ^{3,2}	RH	No current plans / RH herding	Vocational aspiration	Yes
12 ^{3,2}	RH	No current plans/ RH herding	Vocational aspiration	Yes
13 ^{3,2}	RH	No current plans/ RH herding	Vocational aspiration	Yes
15 ^{3,2}	RH	No current plans/ RH herding Snowmobile mechanic	Vocational aspiration	Yes
16 ^{3,6}	RH	Odontology master's/dentist	High educational aspiration	Yes

Notes:

¹ Do you see yourself staying in the community or moving away?

² Participant was interviewed only once

³ Upper secondary

⁴ Vocational studies: reindeer husbandry course

⁵ Drop-out

⁶ General studies

Discussion

The overall aim of the present paper was to explore potential stressors and resilience factors among young Indigenous Sami during their transition to adulthood with regard to current school issues and future educational aspirations and plans. In addition, we explored the impact of these on youth well-being and health as well as associated challenges and stressors. We also drew attention to cultural continuity as a broader health determinant in Indigenous communities and how adolescents' school experiences and future plans might influence community and/or cultural continuity. In summary, the participants reported both well-being and stressors related to school, categorized as educational factors (e.g. favourite subjects, struggling with grades, and qualified teachers), environmental factors (e.g. noise, old school buildings) and social factors (e.g. bullying, peer pressure, friendship) (Table 2). Future plans and aspirations were strongly related to place attachment. Females were more prone to have plans to move away to attend college or university. Although females reported higher educational aspirations, they were more likely to find school boring (4/6) than males (1/5) (Table 2). RH youth, in particular males, planned vocational studies and to remain in the community, showing stronger ties to both the community (place attachment) and the land (cultural continuity) (King *et al.* 2009). As found in other studies of young adults (Jørgensen 2018), the study revealed possible mental health problems (bullying causing low self-esteem) and physical health issues, such as those found among sixth-graders in elementary schools in Finland caused by poor indoor air quality (Turunen *et al.* 2014). A poor indoor environment may be a health risk and lead to school absence.

Contemporary School Challenges, Stressors, Well-Being and Health

Both positive (e.g. caring teachers, canteen, socializing) and negative (e.g. bullying, noise, poor teaching, learning difficulties, peer pressure, and boredom) school-related issues were reported. Here we revealed boredom and bullying to be challenges faced by Sami youth, which is in line with findings on Indigenous peers in the Russian (Indigenous Eveny in north-eastern Siberia), Alaskan and Canadian (Inuit) parts of the CIPA pro-

ject (Kral *et al.* 2014; Rasmus *et al.* 2014; Ulturgasheva *et al.* 2014; Wexler *et al.* 2014). The main challenges affecting pupils' well-being and health seemed to be social issues such as bullying, rumours, exclusion and peer pressure. Bullying negatively affects self-esteem, learning, health and well-being, and causes depression (Jørgensen 2018). Two participants reported lower self-esteem due to experiences of bullying, in line with other studies indicating that bullying can cause long-term damage to self-esteem (Smokowski & Kopasz 2005) and lead to health problems such as post-traumatic stress, anxiety and depression (Jørgensen 2018). Findings from *Ungdata* (Bakken 2019) in the study community of eighth–tenth-graders revealed higher rates of bullying (10%) than the national Norwegian level (8%) but lower than for Finnmark County in general (11%). A comparison of data on bullying between three of the nine Sami municipalities in Northern Norway and non-Sami municipalities showed higher bullying rates in the Sami municipalities (Udir 2020). Participants reported more bullying in elementary school, which is in line with the annual Norwegian Pupil Survey (Udir 2020; Wendelborg 2020: 7). Our data revealed that rumours, exclusion or bullying were reported by 13 of 22 participants; they were not always experienced by the person concerned, but seen as problematic behaviour also among peers. Bullying among Indigenous Sami may be influenced by the culture, as traditional Sami parenting includes values like hardiness. Hardiness has been perceived as a value in child rearing, especially among those with RH affiliation (Javo *et al.* 2003). Balto (1997) has focused on *nárrideapmi* 'teasing' in traditional Sami child rearing aimed at making children more robust and withstand more (Balto 1997; Javo *et al.* 2003). There may be a fine line between bullying and *nárrideapmi* or joking/teasing and it depends on the relationship between those involved whether they perceive it as teasing or bullying. Among good friends or in safe friendship networks a *hard and tough* way of joking would work well, as noted by some of the participants. Teasing might sometimes be perceived by peers as bullying and is not always as harmless as it seems. In addition, previously published data from the Norwegian CIPA revealed inter-ethnic bullying or discrimination due to exclusion related to ethnicity, as three bilingual and monolingual Norwegian-speaking participants (Nystad *et al.* 2017) had experienced exclusion (bullying) for being Sami. Hansen *et al.* (2008), using data from a population-based study from 2003–2004 on health and living conditions in regions with Sami and Norwegian populations (Saminor 1), including 36 to 79-year-old participants (n=12,265; 33.1% ethnic Sami origin), found that bullying had been significantly more frequently experienced by Indigenous Sami than ethnic Norwegians in both state schools and boarding schools. There was a trend that the stronger the Sami affiliation, the higher the prevalence of self-reported bullying. Significantly, more Sami women than men had experienced bullying (Hansen *et al.* 2008).

A Swedish study by Omma & Petersen (2015) conducted in 2008 including 12 to 18-year-old pupils (n=121) with Sami self-identification found that 60% of Sami sixth to twelfth-graders reported low functioning and well-being in the school environment, with regard to teacher support and academic performance. A major difference between the paper by Omma & Petersen (2015) and our study was the ethnic community context. The majority of the Swedish Sami youth attended Swedish schools and had Swedish classmates and teachers, while our qualitative study was conducted in a majority Sami context, with ethnic Sami and Sami-speaking peers and teachers, both in the community and at school. The quantitative sample by Omma & Petersen (2015) showed that 24.8% reported being treated unfairly by teachers because of their Sami background, while 14.9% had heard teachers saying something bad about the Sami. In our study, howev-

er, there were no examples of teachers behaving in either of these ways. In the majority context of the Norwegian part of the CIPA study, three of 22 participants reported intra-ethnic discrimination due to poor Sami language skills and low community attachment (Nystad *et al.* 2017). This finding implies that most of the bullying in a majority Sami context was not related to ethnic issues, although it may be more prevalent in a Norwegian-dominated context with a minority Sami population. Hansen *et al.* (2008) revealed that ethnic discrimination among adult Sami was more likely to be reported in areas where Sami were a numerical and cultural minority.

Both the social and physical school environment may influence adolescents' learning capacity, academic achievement, well-being and health (Maxwell 2016; Turunen *et al.* 2014). Here, the participants reported poor indoor air quality and noise, leading to breathing difficulties and headache. In conjunction with a cold climate and an old school building, the length of compulsory schooling and the hours spent in class might influence pupils' well-being (lack of canteen) and negatively affect health (e.g. asthma, headaches). A Finnish study from 2014 (Turunen *et al.* 2014) including 4,248 sixth-graders which investigated indoor environment quality in primary schools revealed that 5.5% reported weekly headaches, while fatigue and nasal congestion were even more common, being reported by 11% of sixth-graders. These symptoms could all contribute to school absence or lower academic performance. Finland, in contrast to Norway, offers free school meals to all pupils. A quantitative study of Norwegian 15 to 17-year-olds (n=2432) found that regular meals and healthy food were of great importance for academic achievement (Stea & Torstveit 2014).

Our data revealed that pupils considered well-qualified, academic and caring teachers to be good support. Good academic, environmental and social quality in school are factors that influence pupils' well-being. School boredom and difficulties with subjects could affect pupils' well-being as much as rumours and bullying. Struggling with schoolwork could partly be due to the lack of qualified teachers, as reported by final-year pupils in upper secondary school. Earlier published data from the NNYS in the 1990s showed (Kvernmo *et al.* 2003) that Sami youth were less pro-school than non-Sami upper secondary school pupils, as measured by parental interest in their schooling, helping with homework, encouraging them in their schoolwork and to continue their studies. Overall, parents of Sami youth showed significantly less interest in schooling than Norwegian parents (Kvernmo *et al.* 2003). Generally, females in Northern Norway experienced more parental support. Sami parents in the Sami highland (the study community) showed the least interest in their children's schooling. However, across ethnicity, parental educational level influenced interest in children's schooling. Both Sami and Norwegian parents with a college or university degree reported significantly more positive attitudes toward education (Kvernmo *et al.* 2003). Findings from the NAAHS in 2003–2005 among tenth-graders (Bania *et al.* 2015) show that parents with higher socio-economic status, measured by *parental educational level*, were significantly less likely to report lower educational aspirations. A recently published paper by Torvik *et al.* stated: "Lagging academically from an early age may influence children's academic careers, with consequences for their mental health and educational attainment in adulthood" (Torvik *et al.* 2020: 5).

School satisfaction among eighth to twelfth-graders in the study community has been found to be significantly lower (53%) than the national average (62%) (Bakken 2019). Compared to data from 2012 (Norwegian Institute of Public Health 2012), well-being has decreased. This concurs with earlier findings (Kvernmo *et al.* 2003; Spein *et al.* 2004). One reason for poor school well-being or truancy could be boredom. In previously published

findings from the Norwegian part of the CIPA project, one male upper secondary school pupil stated:

It's boring to get up to go to school. I'm so tired at school. I've been at school for twelve years. On the other hand, it's easy to get up when I know I'm going to the reindeer herd. (Nystad *et al.* 2014: 661)

School dissatisfaction and/or boredom may lead to problems such as low motivation and truancy. In our sample, some pupils reported playing truant due to bullying and a poor social atmosphere at school. In the quantitative North Norwegian Youth Study (NNYS) (Kvernmo *et al.* 2003) from the mid-1990s, various school-related problem behaviours were explored. Truancy (84% vs. 79%) and arguing with the teacher (57% vs. 47%) at least once during the last year were more prevalent among Sami than non-Sami 15 to 19-year-old pupils. Among Sami upper secondary school pupils, only truancy was more prevalent among females (87% vs. 81%), while all other kinds of problem behaviour (quarrelling with the teacher, being sent out of the classroom) were more prevalent among males (Kvernmo *et al.* 2003). Various school-related problem behaviours (truancy more than ten times in the past year) were associated with about three times higher use of hashish and other illegal substances, and the same trend was seen for smoking and drinking (Kvernmo *et al.* 2003).

Future Educational Aspirations and Plans

The high educational aspirations shown in Table 3 agree with a survey from 2019 (Bakken 2019), as 59% of tenth-graders (n=73) in the study community had ambitions of going to university or college, compared to the national average of 61%, and slightly higher than the Northern Norwegian average of 54% (Bakken 2019). The present study concurs with previous studies with regard to gender differences and lower aspiration among males and Sami (Bania *et al.* 2015). Bania, Lydersen & Kvernmo (2016), using data from the NAAHS in 2003–2005 merged with register data from the National Education Database (n=3987), found significantly higher educational aspirations in upper secondary school among females than males, but no significant ethnic differences between Sami (41.3%) and non-Sami (36.8%). However, higher educational aspirations did not predict future non-completion rate. Adolescent mental health factors were associated with increased risk of non-completion across genders, but the impact varied between the genders. Using the same dataset, Bania & Kvernmo (2016) found that completion of upper secondary school was the only predictor of tertiary education across genders. In addition, mental health problems, such as behaviour problems in females and problems requiring specialist mental health treatment in males, predicted less likelihood of pursuing a tertiary education.

In the NAAHS study in 2003–2005, Sami tenth-graders and males generally had significantly higher vocational aspirations (Bania *et al.* 2015). Overall, data from the NAAHS revealed that 23.7% reported higher educational aspirations, with no significant ethnic differences but with a significant gender difference (females 24.5%, males 20.4%). A recently published paper revealed that “Indigenous Sami do not differ from majority peers in completing upper secondary school and complete tertiary education equally or even more, than majority Norwegians” (Bania *et al.* 2019: 8). This might indicate that formal education is now being considered more important by minority Sami youth.

Our qualitative findings (Table 3) partly support previous findings, as RH females

had educational plans, while four of six males planned to continue reindeer herding and had higher vocational aspirations (Kvernmo *et al.* 2003; Bania *et al.* 2016). According to Bania & Kvernmo (2016), using baseline data from the NAAHS, men residing in the northernmost remote areas were less likely to complete higher education. This gender pattern concurs with previous qualitative findings from the study community, where males had higher vocational aspirations (Nystad 2007). In the study community, we see an increasing gender gap in higher education (lower degree) from 1987 to 2012 (females 9%–32%, males 6%–12%) (Statistics Norway 2012). The NNYS study conducted in the mid-1990s included a question about the desired job at age 40. Among Sami males in general, reindeer herding was the fourth most frequently reported job of choice at age 40. However, among RH males, 12 of 14 wanted to be a reindeer herder, while the proportion among RH females was 12.9% (Kvernmo *et al.* 2003). The lack of higher educational aspirations found among young RH males in the study community might be connected to cultural values and opportunities to continue reindeer herding. A 1999 study from the community revealed that young RH males prioritized traditional ecological knowledge about reindeer herding in response to their families' expectations, as it was important to maintain family traditions (Nystad 2007). Educational aspirations were not the only reason for leaving the community; lack of extended family in the community was a further reason. Poor Sami language skills were noted among three multi-ethnic Sami adolescents who experienced inter-ethnic discrimination or bullying (Nystad *et al.* 2017).

Cultural Continuity and Health

According to King *et al.* (2009), cultural and historical continuity and ties with family, community and the land are factors that keep Indigenous people strong when facing adversity and stress. Intergenerational knowledge transmission, self-government, land claims and formal education promote cultural continuity (Antonovsky 1979; Chandler & Lalonde 1998; Chandler & Lalonde 2008; Auger 2016) and have been found to enhance mental and physical health. Cultural continuity means that events are connected; it promotes ethnic identity, which has been found to improve mental health (Chandler & Lalonde 1998; Kirmayer *et al.* 2009). Intergenerational knowledge and language transmission are considered as a central component in cultural continuity (Auger 2016; Oster *et al.* 2014). The impact of social networks, community and land has previously been discussed by Nystad *et al.* (2014) and was found to have a potentially positive impact on adolescents' self-worth, self-esteem, belonging, and positive ethnic identity and pride.

Traditional knowledge is taught in schools to some degree, but the participants, especially lower secondary RH adolescents, reported that traditional knowledge transmission mainly took place within the nuclear and extended family. A previous paper from the Norwegian part of the CIPA study (Nystad *et al.* 2014) reveals the essential role of parents and family in the transmission of cultural knowledge to the next generation and the important role of males in the transmission of traditional ecological knowledge. Further, the data indicate differences between families in the degree to which traditional knowledge is passed on, due to modern everyday life, Internet use and limited time and opportunities for adolescents to acquire this knowledge. The role of the school is thus more important than ever in the transmission of traditional knowledge and in its contribution to cultural continuity.

The central curriculum and national tests provide guidelines for teaching and Sami traditional knowledge is given limited scope. A study of mathematics teaching in lower secondary school showed that "when the teachers' behaviour was controlled by national

rules, guidelines and textbooks, almost no culturally responsive mathematics took place” (Fyhn *et al.* 2016: 422). Traditional knowledge and culture-based teaching in lower secondary school might to some extent depend on teachers’ personal interest, competence and faith. Teachers need support and encouragement to implement culturally-based teaching (Fyhn *et al.* 2016). Fyhn *et al.* argue: “An improvement strategy cannot be carried require thorough implementation in institutional teaching cultures in an innovative way” (Fyhn *et al.* 2017: 105). Keskitalo & Määttä (2011) argue that schools’ structure and regulations are founded in the modern Western tradition and ideals and that there is a need to develop a school based on both Sami traditions and contemporary Sami societal needs. It is challenging for local and national school authorities to create and implement solutions that promote a Sami schooling concept for the transfer of Sami knowledge. The upper secondary school reindeer herding course and the flexible university college course for reindeer herders (Magga *et al.* [eds.] 2011) are examples of adaptation to new demands; students combine formal education and participation in traditional reindeer herding.

Further, culture-based education strengthens ethnic identity. Shelton *et al.* (2006) argue that ethnic identity is important in ethnic minorities’ psychological development and may serve as a buffer against stress. A public health report in Norway states: “Education in the Sami language and Sami culture in kindergartens and schools helps to build identity and security” (Norwegian Ministry of Health and Care Services 2013: 44).

In this study, RH adolescents are strongly bound to both land and community through reindeer husbandry, as found in a previous study in the community (Nystad 2007). Community-minded adolescents wish to remain despite a possible lower income. By contrast, earlier findings from the Norwegian part of the CIPA study revealed that RH youth valued reindeer herding highly and were eager to acquire more traditional knowledge like the different names of snow and reindeer fur, and various parts of the reindeer carcass and reindeer earmarks, elements in a complex system which is essential knowledge for herders (Nystad *et al.* 2014).

Most Indigenous adolescents in our study community, in particular RH youth, had strong place attachment. Simpson maintains that this is critical to the education of Indigenous students, pointing out that the main goal of mainstream education is a successful career path in a hyper-capitalistic system. Further, Simpson, a Canadian Indigenous academic, argues that Indigenous people instead need to “create generations of people that are capable of actualizing radical decolonization, diversity, transformation and local economic alternatives to capitalism” (Simpson 2014: 23). These factors can strengthen the Indigenous community, increase self-determination and build resilience.

Conclusion

This paper has analysed qualitative data on reindeer husbandry (RH) and non-reindeer husbandry (NRH) adolescents’ school-related well-being and stressors, and their potential impact on individual well-being and community health (e.g. cultural continuity as a proxy measure of adolescents’ future aspirations). Well-being was related to academic (e.g. culturally sensitive education), emotional (e.g. supportive teachers) and environmental factors (e.g. school canteen). Examples of school-related stressors in relation to these factors were boredom, bullying and a bad indoor climate. Negative individual health outcomes were, for example, low self-esteem, asthma, and headache. We also focused on cultural continuity as a determinant of health on the community level, which can be negatively influenced by adolescents’ future aspirations, and positively influenced

by transmission of traditional Sami knowledge in school. Both RH and NRH females showed generally high academic aspirations, while RH males often reported a strong connection to their traditional indigenous lifestyle and plans to stay in the community. Politicians, school authorities, teachers and health workers need more knowledge about Sami adolescents' school stressors and what promotes well-being in the school setting, which again encourages culturally sensitive educational programmes (e.g. the reindeer husbandry course in upper secondary school) and decreases dropout rates. We recommend further research on Sami pupils' well-being and health in school.

NOTES

¹ Johan Turi, a Sami author, wrote the first secular book ever published in Sami in 1910. The book provides insights into Sami life and traditional practices.

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