OBJECTIVE ARTICLE

SUBSTANCE USE AMONG YOUNG INDIGENOUS SAMI – A SUMMARY OF FINDINGS FROM THE NORTH NORWEGIAN YOUTH STUDY

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ABSTRACT

Objectives. To summarise knowledge about substance use among young indigenous Sami living in Norway.

Study design. Data from the North Norwegian Youth Study (NNYS) – a longitudinal questionnaire study conducted in 1994–1995 and 1997–1998 that represents the main source of information in the 1990s.

Methods. The 1994–1995 sample included 3,000 ethnically diverse high school students (response rate [RR]: 85%), while the 1997–1998 follow-up sample included 1,500 respondents (RR: 55%).

Results. Young Sami did not show higher rates than their non-Sami peers for any of the investigated substances. In contrast, young Sami reported lower drinking rates at both assessments when compared with regional and national non-indigenous peers. Nonetheless, Sami with weaker cultural ties reported the highest intraethnic smoking and drinking rates.

Conclusions. Young Sami are not at higher risk for substance use than their regional and national non-indigenous peers. These findings contrast some findings among other indigenous groups indicating “high” indigenous and “low” majority substance use rates.

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Keywords: cigarette smoking, alcohol use, adolescents, indigenous Sami, illicit substances
INTRODUCTION

Prior to the 1990s, cross-cultural studies comparing substance use among young Sami with their regional or national Norwegian counterparts did not exist. At that point in time, there was only 1 report summarizing alcohol use among young Sami (1). The majority of young Sami in the 1976 survey reported using alcohol for “fun,” “excitement” or “as part of social interactions.” In contrast, a minority, in particular young males, reported cultural factors such as identity and cultural conflicts, alienation and drinking as “part of the Norwegian culture” as important contributors to excessive drinking. Furthermore, the 1992 survey indicated that drinking was initiated at an early age, as 90% of males and 67% of females reported first trying alcohol by the age of 12. In the 16 to 30 year-old age group, 27% noted alcohol abuse, of whom one-third were women. A periodic drinking pattern with long periods of abstinence was commonly noted. Fewer gender differences in alcohol use occurred in the 1992 survey than in the 1976 survey. These findings may not be representative of young Sami living in other parts of Norway or Scandinavia. This lack of representation exists for three reasons: (1) data was collected from only 1 northern Sami municipality, Kautokeino in Finnmark County, and (2) the sample sizes were small: 176 and 237 respondents in the 1976 and 1992 surveys, respectively and (3) the 1992 survey included only in-school respondents (1).

The sparse research on substance use among adult Sami in Norway (and Sweden) has not empirically supported the popular myth of the “drunken Sami,” indicating lower (Norway) or similar levels of drinking (Sweden) when compared with their majority peers. However, scattered reports indicate excessive drinking among Sami male reindeer herders in Finland and in the Sami community of Lovozero on the Russian Kola Peninsula. Furthermore, comparable rates of regular smoking has been noted in Norway (men only) and in Sweden (both sexes), while less regular smoking was noted among Sami women in Norway, and more regular smoking noted among Sami men in Finland when compared with their majority peers (2-11). Nonetheless, substance (ab)use among Sami adolescents and adults has been recognized and noted by clinicians for years, and has contributed to the establishment of culturally sensitive in-patient and outpatient treatment services for indigenous Sami substance users and abusers (1–3).

This summary presents prevalence rates of cigarette smoking, alcohol use, cannabis use and other illicit substance use among young indigenous Sami as described in the North Norwegian Youth Study (NNYS). It also presents risk and protective factors associated with smoking behaviour, parental drinking rates and habits, youth drinking context, worries about drinking and cultural factors associated with drinking and smoking behaviours. These findings are discussed in light of the existing literature on substance use for regional and national young Norwegian peers and among adult Sami.

MATERIALS AND METHODS

This summary presents data collected from the North Norwegian Youth Study (NNYS) – a longitudinal epidemiological questionnaire study covering several topics central to adolescence, including substance use. The
Substance use among Sami

The first study wave (T1: 1994–1995) was a strictly school-based study. Twenty-one high schools in north Norway – Finnmark, Troms and Nordland Counties – participated. The schools were selected to represent areas that were inhabited by the 3 main ethnic groups living in the region: the indigenous Sami, the ethnocultural Kvens and the majority Norwegians. All the participating high schools were located in rural and semi-rural areas. In Finnmark County, where most of the Sami-speaking population lives, the baseline questionnaires and information letters were available in the main North Sami dialect. The second study wave (T2: 1997–1998) was a combined school-based (including 0 schools) and postal questionnaire study. More detailed descriptions of the baseline and follow-up study consents and approvals are given elsewhere (12–15).

Sample description
Some of the main baseline (T1) and follow-up (T2) sample characteristics are shown in Table I. Only 15–19 year olds who fell within the natural age span for high school students in Norway at T1 were included. Students older than 19 years were excluded (Table I), as older-for-grade students generally were more likely to be legal and illicit substance users than their younger classmates (16). The T1 sample included 15–19 year olds, and the T2 included 18–22 year olds. Overall, Sami made up 23% of the total samples. A more detailed description of the samples, including the lost to follow-up subsample, is provided elsewhere (2,12–14).

Measuring Sami ethnicity
In Norway, the ethnicity of an individual is not recorded in national registers. The exact number of Sami living in Norway is unknown, but it is estimated to be about 40,000, with the highest number in Finnmark County (17). The Norwegian Sami electoral register data recorded only a minority, including 10,094 Sami in 2001, all being 18 years or older (18).

The official pre–Second World War policy towards the Sami was that of assimilation. Due to this earlier assimilation policy, the reporting

| Survey and sample descriptions. a | Baseline assessment 1994–1995 (T1) | Follow-up assessment: 1997–1998 (T2) |
|---------------------------------|----------------------------------|----------------------------------|
| Invited (n)                    | 4,019                            | 2,947                            |
| Participants (n)               | 3,417                            | 1,678                            |
| Response rate %                | 85                               | 55                               |
| Analysing sample (n)           | 2,997b                           | 1,533                            |
| Spein et al., 2002 (12)        |                                  |                                  |
| Spein et al., 2006 (14)        |                                  |                                  |
| Spein et al., 2004 (13)c       | 2,718b                           | 1,405                            |
| Spein et al., 2007 (15)        | 675b                             | 365                              |
| Age, mean±SD                   | 17±0.8                           | 20±1.0                           |
| Female %                       | 52                               | 60                               |
| Indigenous Sami %              | 23                               | 23                               |

aPartly adapted from Spein, Sexton, Kvernmo, 2006:107 (14).
bPart-time students, responders not reporting their grade level, foreign ethnicity and incomplete/incorrect data were excluded at both assessments, thus only including full-time students.
cWorking sample: 15-18 year old.
of Sami ethnicity has been stigmatized. Earlier national census reports combined with a low rate of emigration have confirmed that this forced assimilation policy has contributed to a loss of ethnic identity and language competency, particularly among the Coast or Sea Sami (19,20). In the papers and report summarized, Sami ethnicity was based on having at least one grandparent with Sami ethnicity or language competency (2,12–14). Figure 1 shows the distribution of Sami based on the different “ethnic-related” variables used. Only 48% of the total T1 sample (n=685) categorized as Sami reported a Sami group or self-identification (21). Furthermore, among these respondents, two-thirds reported mixed ethnic parentage and resided in Norwegian dominated areas (2). Moreover, 14% reported a single Sami self-identification, 31% reported a bicultural Sami/Norwegian self-identification, while 55% reported a single Norwegian self-identification (2,15). A more detailed outline of the ethnicity variable is given elsewhere (8,12–15).

RESULTS

Cigarette smoking rates and patterns among young indigenous Sami

Overall, during the 1990s, baseline (follow-up) smoking rates were as follows: 38% (35%) never smokers, 29% (29%) current regular smokers, 11% (12%) current irregular smokers and 23% (24%) former smokers among Sami and non-Sami peers living in north Norway. Ethnic differences in cigarette smoking were minor and only found among 15 to 19 year olds at T1, as the Sami reported a significantly lower proportion of current irregular smokers (8%) and a higher rate of former smokers (26%) than their non-Sami peers (12). Table II shows the distribution of smoking variables by ethnicity and gender among 15–19 year olds in the NNYS. There was a trend towards Sami females being more likely to be smokers. Nonetheless, significant gender differences occurred only for heavy smokers (≥15 cigarettes/day) at both study assessments, as more males were heavy smokers. However,
no ethnic differences in cigarette consumption level existed (11). There was also an insignificant trend towards higher rates of lifetime prevalence of smoking and daily smoking among young Sami residing in the Sami Highland of Finnmark County (12,21).

| Table II. Baseline smoking rates among 15–19 year olds in NNYS by ethnicity and gender (percentages).a |
|-----------------------------------------------|
| **Lifetime prevalence of smoking (%)**       | Sami | Non-Sami |
| Females                                      | 71   | 66       |
| Males                                        | 56   | 57       |
| **Current smokers**                          |      |          |
| Females                                      | 43   | 42       |
| Males                                        | 31   | 39       |
| **Daily smokers**                            |      |          |
| Females                                      | 32   | 28       |
| Males                                        | 26   | 28       |
| **Occasional smokers**                       |      |          |
| Females                                      | 11   | 14       |
| Males                                        | 5    | 11       |

aAdapted from Kvernmo et al., 2003:51 (21).

bSignificant ethnic differences, lower rates reported among Sami than non-Sami (12).

Smoking behaviour, associated risk-taking behaviours and sociocultural factors
Substance use (intoxication and illicit drug use), externalizing problems (school-related problems, major and minor delinquency), sexual activity (early sexual experiences, several sexual partners in the past, etc.) and attending vocational training predicted regular smoking both concurrently among 15–18 year olds cross-sectionally and prospectively among 18–22-year-old Sami (13). 15-18-year-old Sami attending vocational studies were more likely to be regular smokers than their peers attending general studies. Laestadian Christian affiliation either reported by the young Sami or one of their parents was associated with higher rates of experimental smoking among 15-18-year-old Sami, when compared with their peers who reported an affiliation with the Lutheran State Church. In addition, 15-to-18-year-old Sami reporting a primarily industry background were more likely to report experimental smoking than their peers reporting a working-class background (13).

Among Sami, cultural factors contributed to intraethnic differences in smoking rates (15). First, the effects of living in a Norwegian or an assimilated context (with few other ethnic Sami) and favouring assimilation (Norwegian food, Norwegian friends, Norwegian history, Norwegian music and Norwegian organizations) (22) were associated with more 15–19-year-old Sami being current smokers. Prospectively, 15–19-year-old Sami favouring assimilation were more likely to be smokers in young adulthood. Secondly, 15–19-year-old Sami with stronger ethnic self-identification were more likely to be current smokers (15).

Drinking rates and patterns among young indigenous Sami
The Sami reported significantly lower drinking rates than their non-Sami peers during the 1990s (Table III), for all drinking measures, both in late adolescence (T1) and young adulthood (T2). Gender differences existed for only 2 of 7 drinking variables among the Sami. Binge drinking at T1 (71% vs. 58%, p≤0.001) and current drinking at T2 (78% vs. 67%, p≤0.05) were reported more often among Sami males than females (14).

Parental drinking rates and patterns
Young Sami reported significantly higher parental abstinence rates than their non-Sami peers (fathers: 21% vs. 9%; mothers: 49% vs. 17%), and they were less likely to report that
both parents were frequent drinkers (14% vs. 6%), more often reporting that both parents were abstainers (10% vs. 18%). There were no ethnic differences with regard to having experienced parental intoxication; the majority, 69%, had experienced parental drunkenness at least once (14). Within the Sami group, significantly higher parental abstinence rates were found in the Sami Highland of Finnmark County, including 9% of the mothers and 1% of the fathers (1).

**Youth drinking context**

Across ethnic groups, drinking among 15–19 year olds was strongly related to peer context, with drinking occurring at parties (75%) and when with friends (94%), and included both sexes (87%). Fifteen–19-year-old Sami (53% vs. 44%) drank more often in public gathering places such as when outdoors, at restaurants and at discotheques than did non-Sami. Being worried about their own drinking was reported by 6% of 18–22 year olds, and no ethnic or gender differences occurred. Males (11% vs. 4%) perceived that their friends and families were worried significantly more so than the females. Moreover, Sami were significantly more likely than their non-Sami peers to state that their family and friends were worried about their drinking (14).

**Drinking behaviour and associated cultural factors**

Fifteen–19-year-old Sami who preferred assimilation – that is those who reported positive attitudes towards or preferred Norwegian friends, Norwegian music, Norwegian history, Norwegian food and club membership in Norwegian organizations (22) – were more likely to be current drinkers and intoxicators. Also, 15–19-year-old Sami living in Norwegian-dominated or assimilated contexts and those reporting weaker ethnic Sami identity were more likely to be binge drinkers (15).

**Illicit substance use among young indigenous Sami**

It is significant that fewer 15–19-year-old Sami than non-Sami in north Norway reported ever having used cannabis (4% vs. 10%) or ever having been offered cannabis (20% vs. 27%) during the mid-1990s. During the 3-year follow-up, the prevalent rates of cannabis use increased about twofold, but there was an

| Table III. Baseline and follow-up drinking rates in NNYS by ethnicity (percentages). |
|---------------------------------|---------------------------------|
| Variables at T1 (T2)           | 1994–1995: 15–19 year olds      | 1997–1998: 18–22 year olds      |
|                                 | T1 sample (n=2,950)             | T2 sample (n=1,510)             |
|                                 | Sami % | Non-Sami % | χ² | Sami % | Non-Sami % | χ² |
| Lifetime prevalence of drinking |        |            | 15.2*** |        |            | b  |
| 30-day drinking                |        |            | 26.2**  |        |            | 4.8*|
| Binge drinkers†                |        |            | 10.0*** |        |            | b  |
| 12 (6) month intoxication      |        |            | 11.4*** |        |            | 12.1***|
| 6 month drinking               |        |            | b      |        |            | 10.0**|

Note: *p≤0.05, **p≤0.01, ***p≤0.001.

†Partly adapted from Spein et al., 2006:109 (14).

Assessed either at T1 or T2.

†Binge drinkers ≥5 drinks on the last drinking occasion.
insignificant trend towards lower rates among the Sami. Overall, 2% of 15–19-year-old north Norwegians reported current use of illicit drugs (other than cannabis) during the year prior to the survey. No ethnic or gender differences were observed (13,21).

**DISCUSSION**

Overall, this summary presents data on substance use among young Sami residing in north Norway during the 1990s. In general, data indicate that Sami did not show higher rates than regional non-Sami peers for any of the substances investigated. In contrast, there was less cannabis use (late adolescence) and drinking among (late adolescence/young adulthood) Sami. Moreover, young Sami were more likely to consume alcohol in public places, confirming earlier suggestions of more public drinking among indigenous Sami when compared with their majority peers (4,5). This “drinking pattern” may contribute to the existence of the historical myth of the “drunken Sami” (23–25). Drinking among young Sami generally occurred in social contexts that were characterised by “fun” and “excitement” (1), including at parties and with friends (14). Also, regular smoking was strongly associated with various risk-taking behaviours among the young Sami, similar to non-indigenous and indigenous peers elsewhere (2,13). Furthermore, only a minority of young Sami in the 1976 survey reported using alcohol due to Norwegianisation and cultural alienation (1).

Similarly, intraethnic differences in substance use rates due to cultural factors occurred, although the association of acculturation on substance use was strongest in late adolescence (15). Sami with weaker cultural ties to their native culture such as preferring assimilation (e.g., pro-Norwegian attitudes), weaker ethnic (Sami) identity and residing in Norwegian-dominated contexts (with few ethnic Sami members) manifested the highest “intraethnic” drinking and/or smoking rates, when simultaneously controlling for important sociodemographics such as parental socio-economic status and youth and/or parental Laestadian Christian affiliation (15). These findings may be related to (acculturation) stress resulting from adaptation problems; often young indigenous Sami live in Norwegian-dominated contexts (e.g., Nordland County) and are influenced by and exposed to the majority culture, although some strong enclaves of Sami culture exist in these areas. Moreover, stress is an important risk factor for adolescent smoking (15,26,27).

Finally, drinking is a social phenomenon, and young Sami living in Norwegian-dominated contexts are socialized along with their majority peers. Nordland County, for example, has the highest national alcohol consumptions level in the country (28). The Sami as a group most likely adapt to the regional drinking norms and style of their majority Norwegian peers, as binge drinking occurred more often among 15–19-year-old Sami living in Norwegian-dominated contexts (15). This reflects the fact that young Sami seem to engage in a binge-drinking style more frequently than their indigenous peers elsewhere (2).

Studies conducted in North America and Greenland have generally found higher substance use rates among indigenous adolescents when compared with their majority peers (2,30–35). For example, smoking rates as high as 80% have been noted for some
indigenous Arctic groups. The lack of “high” indigenous (Sami) substance use rates versus “low” majority (non-Sami) substance rates when compared with other comparable indigenous groups (30–35) was discussed in light of 6 possible explanations (12,14).

(1) Relatively fewer social class inequalities among Sami with regard to poverty rates, unemployment and educational level. Nonetheless, lower annual incomes, higher rates of social welfare and lower life expectancy have been found in the Sami-dominated areas of north Norway (36). In particular, smoking has been associated with the lower social classes (12). Finnmark County, which has the highest number of Sami, also has the highest national smoking rates for adolescents, young people and adults (12:166). These findings may partly be due to the lower educational level in Finnmark County, as highly educated people generally report lower “social acceptance” for smoking (2). Among the young Sami, there was a strong association between the individual’s own socio-economic status measured by school type (vocational studies) and regular smoking (13). Experimental smoking was associated with a primarily industrial background (including reindeer herding) among young Sami. In Norway, about 3,000 Sami make their living from semi-nomadic reindeer herding (17), which is an exclusive Sami way of living, which is not the case in Finland (5,12). Significantly more Sami (19%) than non-Sami (11%) reported a primarily industrial background (13).

(2) Less parental substance use among Sami. Generally, parental substance behaviour and attitudes increases the likelihood of substance use among their children (38). Young Sami residing in Finnmark County had been exposed to lower maternal smoking rates than their non-Sami counterparts (2, 6–9) and the lowest rates had been noted among Sami women in the Sami Highland of Finnmark County (9). Young Sami reported less parental drinking and higher abstinence rates than their non-Sami peers (14,21), findings which have been confirmed by earlier studies (10,11). These findings probably indicate that more “positive” social role models (e.g., parental abstinence) are available for young Sami.

(3) Relatively lower school dropout rates among the Sami. In Norway, the highest school dropout rates are found in north Norway and in Finnmark County, although no data stratifying dropouts by ethnicity are available. Nonetheless, dropout rates averaging 50% have been found among indigenous groups elsewhere, and school dropouts show the highest substance use rates (12).

(4) Religion as a protective factor for substance use (39) exemplified by the Laestadian Christian movement, often called “the Sami Christianity” (40). Laestadianism has practised strong religious, cultural and socio-political influences in northern Fennoscandia (20). In Norway, the number of Laestadian adherents is believed to be between 30,000 and 50,000, the majority of whom reside in north Norway (personal note to the author from associate professor Roald E. Kristiansen, University of Tromsø, received 14 Dec 2007). In the NNYS, significantly more Sami (10%) than non-Sami (4%) reported a Laestadian affiliation or background (13). Finally, it has earlier been noted that Laestadianism has both a religious and a cultural effect. First, the movement holds strong religious anti-alcohol norms (40). Second, Laestadianism
has historically contributed to the preservation and maintenance of Sami language and cultural values in times of harsh assimilation, in line with more current findings (15). These two factors may decrease the risk of substance use (2). Lars Levi Laestadius (1800–1861) was a priest of Sami descent who spoke Sami and had experience alcohol abuse in his family. He also smoked tobacco. The movement’s strong influence on Sami society provides an explanation for the lower rates of drinking observed among some Sami subgroups and communities. Alcohol use may not be considered as a neutral behaviour among the Sami (2,15,40) and could probably explain why young Sami, although reporting less drinking, experienced more worries from family and friends than their non-Sami peers as stricter attitudes and norms towards drinking may exist in the Sami culture (14). In contrast, Laestadianism did not have any strong prohibitions against smoking. Furthermore, Laestadianism was associated with more than a twofold higher risk of experimental smoking among Sami during late adolescents (13,20). However, due to severe health consequences, some Laestadian leaders have recently begun to advise against using tobacco (2).

(5) The historical lack of cultural use of tobacco for ritual and ceremonial reasons by Sami shamans when compared with some Native American groups, although recreational use of tobacco has been noted among Sami. However, there are scattered reports indicating use of alcoholic beverages and hallucinogenic mushrooms for ritualistic purposes. In most cases, Sami shamans used the yoik and the ancient shaman drum, both elements of the Sami pre-Christian religion, as a way of getting in contact with supernatural forces (2,12,41,42).

(6) Regional variation or regional “dryness” with respect to drinking. Respondents in the Sami Highland reported the lowest annual alcohol consumption levels when compared with the county’s average. This finding may be confounded by higher rates of respondents attending religious services (≥1 time/6 months) in the Sami Highland (38%) when compared with national (25%) and county (22%) averages (10). Also, lower smoking rates among women have been found in the Sami Highland (9). The baseline ethnic differences of lower cannabis use among the Sami are possibly confounded by urban–rural differences in cannabis use (and not ethnicity per se), as cannabis is more available in urban areas of (north) Norway. Moreover, Sami more than non-Sami reside in rural and semi-rural areas and the rates of cannabis use (10% vs. 9%) and ever being offered cannabis (27% vs. 26%) for the non-Sami were generally similar to their same-aged national peers (28). At follow-up, many Sami respondents had moved to urban areas (e.g., in pursuit of education, etc.) where cannabis is more easily accessible (21,28).

During the 3-year follow-up period, from late adolescence to young adulthood, there was an increase in the use of both legal and illicit substances among Sami respondents. This increase was probably partly due to an age effect (2) and/or a general trend of increasing substance use rates observed in Norway, Scandinavia and Europe during the same period (43-45). Similarly, increases in substance use and abuse have also been noted among clinicians working in the Sami Highland (2).
Nonetheless, when compared with earlier studies on adult Sami smoking and drinking behaviour, which indicated traditional gender patterns with higher rates among males (2,3,6-9), this present study shows that both tobacco and alcohol use have increased, in particular among young Sami females, as earlier gender differences were minimalized or became nonexistent in the mid and late 1990s (2).

The present summary is regarded as being representative of the rural in-school Sami who belong to the largest Sami group – the North Sami, both the reindeer-herding and the coastal Sami – residing in Finnmark County. However, generalizing these findings to those Sami residing in urban areas and outside of north Norway is likely not warranted. Moreover, generalizing these findings to all Sami across the 4 national states in which they reside may not be appropriate as the political and socio-economic conditions both in the past and present, religious influences, substance use norms, rates and control policy may differ considerably.

Also, some methodological limitations need to be mentioned. First, comparing substance use rates among indigenous groups needs to be made with caution, as both the dependent (e.g., substance use definitions and time frame used, using objective measures of validity such a biochemical markers for tobacco use or not, etc.) and independent (e.g., ethnicity based on self-identification, language preference, etc.) variables often differ considerably among the studies (2). There is a lack of consistency in the “definition” of Sami ethnicity in the Norwegian studies on adult Sami substance use, including language preference (3), region as a “proxy” measure (10) and having 2 Sami grandparents (9), making it difficult to compare different studies with regard to both incidence and prevalence rates. Moreover, the Sami definition used in the NNYS is very broad: respondents with limited Sami biological ancestry (only one Sami grandparent), no Sami upbringing, no Sami self-identification or language competence were categorized as Sami, although the respondents themselves, their families or communities might consider themselves to be ethnic Norwegians (2).

Second, the NNYS results were based on youth self-reports, and under- or overestimations of substance use may have occurred. Alcohol use has been associated with sin and shame in Laestadian Christianity, which could have caused under-reporting of such behaviour. In the NNYS, there was also a significantly higher number of missing responses on the alcohol questions among the young Sami respondents (14). However, the follow-up sample probably contributed to a more representative substance use rate due to the combined school-based and postal questionnaire study design that included school dropouts (2). Sami lost to follow-up reported lower Sami cultural orientation, that is, they were more acculturated, factors being associated with more drinking and smoking (15). Nonetheless, our follow-up figures may be conservative, as lost to follow-ups were more likely to be regular smokers and binge drinkers (12,14).

Future epidemiological research on the Sami needs to focus on the influence of discrimination and marginalization on substance use and explore whether difference in substance use among mono versus multicultural Sami exist. Studies among comparable indigenous groups or ethnic minorities have found such associations (2,15).
Conclusions
Young Sami were not at a higher risk of substance use as compared with their regional or national non-indigenous peers during the 1990s. In fact, young Sami reported less drinking, although they did report more “visible” drinking in public places, higher parental abstinence rates and experienced more worries from family and friends. Aspects of acculturation such as a weaker Sami identity and assimilation (e.g., reporting pro-Norwegian attitudes) were associated with an increased risk of substance use in late adolescence. Although Norwegian policy encourages integration and pluralism, the lack of ethnic family and structural support, combined with stressors related to minority status such as discrimination, could contribute to the present findings. In contrast, the Sami Highland is characterised by a high density of Sami residents (80–90%) and a high number of Sami speakers (80%), offering structural and practical supports that include Sami institutions for education, health services, research, media and art, and the Sami Parliament. The present summary gives some evidence that a strong ethnic identity and an environment supportive of that identity will influence the rate of substance use. The relatively “low” indigenous (Sami) versus the “low” majority (non-Sami) substance use rates in north Norway when compared with comparable indigenous groups elsewhere are discussed in light of 6 sociocultural factors. In particular, the low rates of drinking observed among young Sami is believed to be strongly influenced by the strong anti-drinking norms held by the Laestadianism. It is interesting to note that significantly more young Sami reported such affiliation or background during the 1990s.

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