

ORIGINAL ARTICLE

The relationship between internalizing and externalizing symptoms and cultural resilience factors in Indigenous Sami youth from Arctic Norway

Margrethe Bals^{1,2}, Anne Lene Turi^{1,2}, Ingunn Skre¹, Siv Kvernmo^{2,3}

¹ Department of Psychology, University of Tromsø, Tromsø, Norway

² Department of Child and Adolescent Psychiatry, Division of Child and Adolescent Health, University Hospital of North Norway, Tromsø, Norway

³ Regional Centre of Child and Adolescent Mental Health, Region North, Institute of Community Medicine, Faculty of Medicine, University of Tromsø, Tromsø, Norway

Received 7 March 2010; Accepted 28 July 2010

ABSTRACT

Objectives. To examine whether enculturation factors, like cultural activities, ethnic pride and native language competence, are related to decreased internalizing and externalizing symptoms in Indigenous Sami youth from Arctic Norway. The impact of self-efficacy on the relationship between enculturation factors and mental health problems was also examined.

Study design. Population-based, cross-sectional questionnaire study.

Methods. The Norwegian Arctic Adolescent Health Study was conducted among 10th graders in junior high schools in north Norway during 2003–2005. The study sample consisted of 450 Indigenous Sami youth, aged 15–16 years. Internalizing symptoms were measured with the Hopkins Symptom Check List-10 (HSCL-10), while externalizing symptoms were measured by two subscales of the Strengths and Difficulties Questionnaire (SDQ).

Results. For boys, self-efficacy and participation in cultural activities were associated with decreased internalizing symptoms. Additionally, self-efficacy interacted with Sami language competence and cultural activities: when self-efficacy increased, these enculturation factors were related to symptom reduction. For girls, self-efficacy had an independent effect on internalizing symptoms and also strengthened the relationship between participation in cultural activities and reduced externalizing symptoms. Sami language competence was related to the reduction of both internalizing and externalizing symptoms in girls.

Conclusions. In the present study, several enculturation factors as well as self-efficacy were identified as potential protective factors against mental health problems. In order to develop theoretical models that explain the mechanisms between cultural resilience and mental health, there is a need for both qualitative studies and longitudinal studies.

(Int J Circumpolar Health 2011; 70(1): 37-45)

Keywords: adolescence, enculturation, Indigenous Sami, mental health, resilience, self-efficacy

INTRODUCTION

Historical trauma, cultural loss and ongoing oppression have been linked to mental health problems in Indigenous adolescents in the Arctic (1). To recover or develop resilience as a response to these vulnerability factors, a focus on cultural protective factors is essential. Since cultural discontinuity is causing ill health for Indigenous peoples, cultural resilience may be important in healing and recovery (2,3). Resilience is the process of overcoming ongoing and acute difficulties or risks. Resilience factors may include protective processes within the individual (self-efficacy, intelligence and communication skills), within the family and peer network (supportive families and close relations) and within the school environment and the community (supportive communities, positive teacher influence) (4). Cultural resilience refers to the role of culture as a resource for resilience in the individual (5).

The different cultural resilience factors for Indigenous youth that research has proposed all involve enculturation processes. Enculturation represents the degree to which an individual is embedded in his/her cultural traditions by learning about and identifying with traditional practices, language, spirituality and cultural identity (6,7). Research has demonstrated that factors such as strong cultural orientation and ethnic identity, participation in cultural practices, ethnic pride, traditional spirituality and community support are protective against different problem behaviours for Indigenous youth (6,8–15).

Cultural resilience factors may have an independent effect on emotional and behavioural problems, or may have a protective effect by operating through various individual, family

or community resilience factors. Zimmerman and colleagues found that enculturation in the presence of high self-esteem served as a protective factor against negative behaviours (16). Some studies find a positive relationship between self-esteem and enculturation, although different studies find conflicting results (17).

Previous research on cultural factors affecting the mental health of Indigenous Sami adolescents has focused on ethnic identity and ethnic context (18,19). Contrary to the hypothesis that a strong ethnic identity is a protective factor, empirical findings from the Sami youth population suggest either no association to health outcome or a negative relationship to it (19,20). The hypothesis that Sami-dominated ethnic context is related to positive mental health outcome has partly been supported by empirical studies (18,19). The ethnic context hypothesis assumes that living in a Sami-dominated context (with a high density of Sami) implies more cultural support in the community, and that this support is positively related to mental health outcomes.

Thus, previous research on Indigenous youth samples has found that enculturation factors such as cultural activities, ethnic pride and native language are acting as resilience factors. The major aim of the present study was to examine whether these enculturation factors influence externalizing and internalizing mental health problems in Indigenous Sami adolescents. Additionally, the hypothesis that general resilience factors may interact with cultural factors was examined. We assumed that a high degree of self-efficacy may strengthen the relationship between cultural resilience factors and decreased mental health problems.

METHODS

Sample and procedure

The Sami are the Indigenous people residing in the Arctic region of northern Scandinavia (Norway, Sweden, Finland and the Russian Kola Peninsula), and are estimated to comprise approximately 60,000–110,000 individuals in these 4 countries (21). Approximately 70% of the Sami people live in Norway, where they are formally considered an Indigenous people with their own culture and native language.

From January 2003 to January 2005, the Norwegian Arctic Adolescent Health Study (NAAHS) was conducted among 10th graders in junior high schools in the 3 northernmost counties in Norway: Finnmark, Troms and Nordland. A total number of 5,877 students were invited to participate, and 4,880 accepted (RR: 83%). In the present study, only Indigenous Sami adolescents were included. The study sample consisted of 450 Sami adolescents, 15–16 years old. Sami ethnicity was measured by an assessment of Sami parentage and Sami self-labelling, with participants having one or both of these classified as having Sami ethnicity (22,23). The questionnaires were administered in classroom settings, monitored by project staff. The students and their parents were given written information about the study, and the students gave written consent. The questionnaire was available in both the Sami and Norwegian languages. The study obtained approval and consent from the Regional Medical Ethical Committee, the Norwegian Data Inspectorate and the school authorities. The data collection was conducted and funded by the Centre for Sami Health Research at the University of Tromsø and the Norwegian Institute of Public Health, in collaboration.

Measures

Internalizing symptoms. Internalizing symptoms were measured with the Hopkins Symptom Checklist-10 (HSCL-10), which is designed to measure symptoms of anxiety and depression (24). Adolescents recorded their own estimates of symptom severity present during the preceding week on a 4-point scale ranging from (1) not at all troubled to (4) extremely troubled. The internal consistency on the 10-item scale was $\alpha=0.86$.

Externalizing problems. Externalizing problems were measured by two subscales of the Strengths and Difficulties Questionnaire (SDQ) (25), the hyperactivity subscale and the conduct problem subscale, with 5 items each. Each one of the items could be rated (0) not true, (1) somewhat true or (2) certainly true. The internal consistency on the 10 items was $\alpha=0.72$.

Ethnic context. Communities were classified as either Sami dominated or Norwegian dominated. The Sami-dominated context was characterized by a high density of Sami (>60%) and a high degree of ethnic support. Several Sami national institutions would be located in these contexts and Sami and Norwegian language would have equal status. In the Norwegian-dominated context there would be a lower density of Sami, fewer Sami speakers and less ethnic support from the community compared with the Sami-dominated context. Ethnic context was dummy coded as Norwegian-dominated context=1 and Sami-dominated context=2.

Socio-economic status (SES). Participants were asked about both their mothers' and fathers' occupations. This information was classified according to the International Standard Classification of Occupation ISCO-88 (26), which is also the basis for the Norwegian occupational standard. The categories of ISCO-88 were reclassified

into 5 categories, based on the parent with the highest rated occupation. SES was dummy coded as high SES=2 (the 2 highest rated occupations) and low SES=1 (the other occupations).

Sami language competence. The adolescents were asked to report whether they had learned the Sami language at home or as a first or second language at school (no=1 and yes=2).

Ethnic pride. The statement "I have a lot of pride in my ethnic group and its accomplishments" was rated on a 4-point scale ranging from (1) strongly disagree to (4) strongly agree. This item was adopted from the 12-item Multigroup Ethnic Identity Measure (27).

Cultural activities and traditions. The statement "I participate in cultural practices of my own group such as special food, music or customs" was rated on a 4-point scale ranging from (1) strongly disagree to (4) strongly agree. This item was adopted from the 12-item Multigroup Ethnic Identity Measure (27).

Self-efficacy. Self-efficacy was measured with 5 questions: (1) "I can always solve a difficult problem if I try hard enough," (2) "Even when people work against me, I can figure out how to reach my goals," (3) "When I have a problem I can't figure out, I know that eventually I will find a solution," (4) "I am sure that I can deal with unexpected events effectively" and (5) "I remain calm when there are problems, I do trust in my own ability to cope with problems." The adolescents responded on a scale ranging from (1) strongly disagree to (4) strongly agree. The internal consistency on the 5-item scale was $\alpha=0.77$.

Statistical analyses

A stepwise hierarchical regression model was conducted in order to identify predictors of internalizing and externalizing symptoms. The independent variables were Sami language compe-

tence, ethnic pride, cultural activities, self-efficacy and ethnic context, while socio-economic status was a control variable. To control for multicollinearity, a correlation analysis was made between all the independent variables. None of the correlations were above $r=.40$, except the correlation between ethnic context and Sami language competence, which was $r=.68$.

First, some preliminary analyses were run to decide which variables should be included in the full models. Six small regression models were conducted for each gender and each dependent variable. Every model included 2 cultural resilience factors together with their interaction term: (1) ethnic context, ethnic pride and ethnic context x ethnic pride, (2) ethnic context, cultural activities and ethnic context x cultural activities, (3) ethnic context, self-efficacy and ethnic context x self-efficacy, (4) self-efficacy, Sami language and self-efficacy x Sami language, (5) self-efficacy, ethnic pride and self-efficacy x ethnic pride, (6) self-efficacy, cultural activities and self-efficacy x cultural activities. The variables that occurred as statistically significant on a 0.05 level for one or both of the genders were included as predictors for internalizing symptoms and/or externalizing symptoms in either of the full models. Then, the full stepwise hierarchical models for internalizing and externalizing symptoms were conducted separately for boys and girls. In step 1, ethnic context and socio-economic status were included even if they did not remain statistically significant in the preliminary analyses. In step 2, resilience factors were included if they remained significant in the preliminary analyses; these factors were Sami language, ethnic pride, cultural activities and self-efficacy. In step 3, the interaction terms that were statistically significant in the preliminary analyses were included.

RESULTS

The greatest differences between youth from Sami-dominated and Norwegian-dominated contexts were that a larger proportion of youth from Sami-dominated contexts had learned the Sami language at school ($\chi^2(1)=2.01, p<.001$), and that they participated in more cultural activities than youth from Norwegian-dominated contexts ($t(402)=-4.28, p<.001$). There were few gender differences in the baseline reports of the study variables (Table I).

For boys, the main factors most strongly associated with decreased internalizing symptoms were participation in cultural activities and self-efficacy (Table II). Self-efficacy interacted with Sami language competence and cultural activi-

ties for boys: increased self-efficacy combined with Sami language competence was related to decreased levels of internalizing symptoms, and when both self-efficacy and cultural activity were low, internalizing symptoms were increased. For girls, Sami language competence and self-efficacy were associated with decreased internalizing symptoms (Table II).

None of the enculturation variables were individually related to externalizing symptoms for boys, while for girls, Sami language competence was related to decreased externalizing symptoms (Table III). Ethnic pride interacted with ethnic context for both genders. Boys living in a Sami-dominated context with high ethnic pride had decreased externalizing symptoms, while for boys in a Norwegian-dominated context ethnic pride

Table I. Enculturation factors, self-efficacy, internalizing and externalizing symptoms by ethnic context and gender.

	Sami dominated		Norwegian dominated	
	Boys % (n)	Girls % (n)	Boys % (n)	Girls % (n)
High SES	60 (22)	71 (29)	56 (87)	52 (79)
Sami language competence	82 (37)	85 (39)	9 (17)	13 (22)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Ethnic pride	3.21 (0.95)	3.41 (0.88)	2.99 (1.12)	3.17 (0.99)
Cultural activities/traditions	2.64 (1.01)	2.79 (1.14)	2.10 (1.14)	2.15 (1.12)
Self-efficacy	3.08 (0.48)	3.07 (0.46)	3.00 (0.58)*	2.87 (0.50)
Internalizing symptoms	1.28 (0.47)	1.66 (0.48)**	1.32 (0.38)	1.69 (0.58)**
Externalizing symptoms	3.24 (1.76)	2.60 (1.52)	3.46 (1.84)*	3.10 (1.56)

* $p<0.05$, ** $p<0.001$

Table II. Hierarchical multiple regression model of enculturation factors and self-efficacy predicting internalizing symptoms.

	Boys			Girls		
	β	Final β	R^2	β	Final β	R^2
Step 1			.00			.01
Socio-economic status (SES)	-.03	.01		.06	.07	
Ethnic context	-.01	.10		-.06	.17	
Step 2			.10*			.08*
Sami language competence	-.03	.01		-.29*	-.29*	
Ethnic pride	.05	-.01		-.02	-.00	
Cultural activities	-.19*	-.21*		.12	.13	
Self-efficacy	-.29**	-.31**		-.15*	-.17*	
Step 3			.19**			.10
Ethnic context X Ethnic pride	-.12	-.12		-.03	-.03	
Self-efficacy X Sami language	-.22*	-.22*		-.01	-.01	
Self-efficacy X Cultural activity	.24*	.24*		-.14	-.14	

* $p<0.05$, ** $p<0.001$; SES: 1=low, 2=high; Ethnic context: 1=Norwegian dominated, 2=Sami dominated; Sami language competence: 1=no, 2=yes.

Table III. Hierarchical multiple regression model of enculturation factors and self-efficacy predicting externalizing symptoms.

	β	Boys Final β	R ²	β	Girls Final β	R ²
Step 1			.01			.05*
Socio-economic status (SES)	-.11	-.08		-.19*	-.19*	
Ethnic context	-.11	-.03		-.13	.01	
Step 2			.03			.07
Sami language competence	-.06	-.04		-.20	-.20*	
Ethnic pride	-.07	-.15		-.01	.03	
Cultural activities	.05	.03		.07	.07	
Self-efficacy	-.19*	-.17*		-.14	-.14	
Step 3			.06*			.12*
Ethnic context X Ethnic pride	-.21*	-.21*		.19*	.19*	
Self-efficacy X Cultural activity	.09	.09		-.20*	-.20*	

*p<0.05; SES: 1=low, 2=high; Ethnic context: 1=Norwegian dominated, 2=Sami dominated; Sami language competence: 1=no, 2=yes.

did not associate with symptoms. For girls, the opposite relationship was found: living in Sami-dominated contexts with high ethnic pride was associated with increased externalizing symptoms. Lastly, for girls, there was an interaction effect between cultural activity and self-efficacy. Girls with a high degree of cultural activities and a high degree of self-efficacy had decreased externalizing symptoms (Table III).

DISCUSSION

This study showed that enculturation factors are significantly but moderately associated with decreasing mental health problems in Indigenous Sami adolescents. The enculturation factors most strongly associated with mental health symptoms in the Sami youth population were participation in cultural activities and native language competence. As hypothesized, ethnic context and self-efficacy interacted with some of the enculturation factors. Self-efficacy was also independently associated with decreased symptoms. Finally, there were gender differences as to which resilience factors were important for internalizing and externalizing problems.

Theories about the exact mechanisms between cultural resilience and health outcomes are sparsely developed. However, our theoretical framework is that enculturation factors may act as resilience factors through both the individual level and the relational or contextual level. On the individual level, learning about ethnic culture may strengthen the self-esteem, ethnic identity and self-regulation skills of adolescents (8,9). On the relational level, sharing the cultural knowledge and practice with others may increase adolescents’ in-group cohesiveness and support (13). A strong ethnic group affiliation may give the adolescents an experience of “shared meaning making” (9,15). The skills, self-esteem and feeling of support developed through enculturation may give the young people strength to overcome difficulties.

As with findings from the present study, previous research has identified native language competence and cultural practices as possible resilience factors. A recent study provided empirical evidence that efforts to preserve and revitalize traditional language in Indigenous communities were associated with lower suicide rates compared with communities not engaged in such efforts (28). The authors concluded that

Indigenous language competence seems to be a strong predictor of well-being in Indigenous communities. Further, a study by Whitbeck and colleagues found that participation in traditional activities was associated with reduced depressive symptoms (29).

Moreover, the findings from the present study can be related to, although not easily compared with, previous research on the association between ethnic identity and mental health in Indigenous Sami youth. Using a global measure of ethnic identity developed by Phinney (27), Kvernmo and Heyerdahl did not find a relationship between ethnic identity and mental health outcome (19). According to Phinney's measure, ethnic identity includes both the exploration of practices, values and beliefs related to one's ethnic group, and the degree of one's personal commitment to these issues. Unlike a global measure of ethnic identity, the focus of the present study was measures of a few specific behaviours and attitudes related to ethnic enculturation. These specific factors are, however, partly overlapping and also related to Phinney's concept of ethnic identity. Thus, differences in the definition of the core concepts may explain the contrasting findings between Kvernmo and Heyerdahl's study and the present study. The use of a global measure of ethnic identity, like Phinney's ethnic identity scale, may hide potential variations in how different aspects of identity relate to emotional and behavioural problems. The differentiation between enculturation factors, however, makes identification of specific factors related to mental health problems possible.

Girls and boys have different genetic or biological dispositions, and when these dispositions interact with environmental factors, this may result in gender differences in mental health and factors related to mental health (30). Kvernmo

and Heyerdahl found that strong ethnic identity in the Sami-dominated context was associated with externalizing problems for Sami girls; this effect was not found for Sami boys (19). Likewise, the results from the present study suggested that high ethnic pride was associated with increased externalizing problems for girls in the Sami-dominated context, while high ethnic pride was related to decreased externalizing problems in boys. Thus, for girls, what was expected to be a resilience factor actually seemed to be associated with increased externalizing problems. There may be several possible explanations for this. Strong ethnic pride may act as a risk factor when your ethnic group is being discriminated against, which generally is the case for the Sami. Perhaps girls this age are more sensitive to ethnic discrimination than boys. Or, maybe boys and girls differ in their developmental paths with regard to ethnic pride. Research has in fact demonstrated that parents tend to emphasize ethnic pride in the ethnic socialization of girls, while focusing more on coping with racism in the socialization of boys (17).

Self-efficacy seemed to be important both in its own right and, in some instances, it also seemed to strengthen the impact of the enculturation factors on problem behaviour. Thus, both general resilience factors and cultural resilience factors may be important health-promoting factors for Indigenous youth. Several theorists have pointed out that the integration of the unique experiences (i.e., enculturation factors) of minority children into general theories of development (i.e., general resilience factors like self-efficacy) is lacking (8,31). The unique experiences of minority groups may determine how general developmental processes can lead to diverse outcomes (32). The findings from the present study highlight this particular principle:

cultural factors should not be studied in isolation; neither should general processes be studied without including culture and context.

There are some limitations to the present study. The data are cross-sectional, which makes any causal arguments problematic. For example, we do not know if participating in cultural activities originates prior to internalizing or externalizing problems or if the activity occurs in response to problem behaviour – or in response to confounding variables not controlled for in the analyses. Another limitation of this study is that the scales used are not validated for the Sami adolescent population. The limited age-span of the adolescents in this study (15–16 years) may create an uncertainty as to whether the results can be generalized to older or younger adolescents. Due to small effect sizes, the findings must be interpreted with appropriate caution. The major strengths of this study are the population-based design and high-response rate.

The largest contribution of this study is the identification of several enculturation factors that may protect against emotional problems and behaviour problems for Indigenous Sami adolescents. Most previous research in this area has been conducted with Native American adolescents; very little systematic research has been conducted on cultural resilience factors in the Indigenous populations of the Arctic. In order to improve and develop further theoretical models in this field, there is a need for both qualitative studies and longitudinal studies. Qualitative studies can contribute to further identifying the relevant cultural resilience factors for the Sami population and also lead to the development of culture-sensitive, or emic, measures. Longitudinal studies, on the other hand, are needed to explore causality. Increasing the knowledge about the relationship between enculturation factors and

mental health is important to the development of a culture-sensitive clinical practice. Finally, the integration of local or cultural resilience factors with the well-known general resilience factors is important when designing preventive programs targeting mental health problems in Indigenous adolescents.

Acknowledgements

The data collection was conducted and funded by the Centre for Sami Health Research at the University of Tromsø and the Norwegian Institute of Public Health, in collaboration. We acknowledge them for providing access to data and for providing financial support. This study was supported by “The National Program for Integrated Clinical Specialist and PhD-training for Psychologists in Norway.” The program is a co-operation between the Universities of Bergen, Oslo, Tromsø, The Norwegian University of Science and Technology (Trondheim), the Regional Health Authorities and the Norwegian Psychological Association. The programme is jointly funded by The Ministry of Education and Research and The Ministry of Health and Care Services. We also want to thank the Sami National Centre for Mental Health for providing financial support.

Conflict of interest

No conflicts declared.

REFERENCES

1. Lehti V, Niemelä S, Hoven C, Mandell D, Sourander A. Mental health, substance use and suicidal behaviour among young indigenous people in the Arctic: a systematic review. *Soc Sci Med* 2009;69(8):1194–1203.
2. Gone JP. A community-based treatment for Native American historical trauma: prospects for evidence-based practice. *J Consul Clin Psychol* 2009;77(4):751–762.
3. King M, Smith A, Gracey M. Indigenous health part 2: the underlying causes of the health gap. *Lancet* 2009;374(9683):76–85.
4. Olsson CA, Bond L, Burns JM, Vella-Broderick DA, Sawyer SM. Adolescent resilience: a concept analysis. *J Adolesc* 2003;26(1):1–11.
5. Fleming J, Ledogar RJ. Resilience, an evolving concept: a review of literature relevant to Aboriginal research. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health* 2008;6(2):7–23.
6. Fleming J, Ledogar RJ. Resilience and indigenous spirituality: a literature review. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health* 2008;6(2):47–64.

7. Zimmerman MA, Ramirez-Valles J, Washienko KM, Walter B, Dyer S. The development of a measure of enculturation for Native American youth. *Am J Community Psychol* 1996;24(2):295–310.
8. Yasui M, Dishion TJ. The ethnic context of child and adolescent problem behavior: implications for child and family interventions. *Clin Child Fam Psych* 2007;10(2):137–179.
9. Wexler L. The importance of identity, history, and culture in the well-being of indigenous youth. *J Hist Child Youth* 2009;2(2):265–276.
10. LaFromboise T, Hoyt DR, Oliver L, Whitbeck LB. Family, community, and school influences on resilience among American Indian adolescents in the Upper Midwest. *J Community Psychol* 2006;34(2):193–209.
11. Lalonde CE. Identity formation and cultural resilience in Aboriginal communities. In: Flynn RJ, Dudding PM, Barber JG, editors. *Promoting resilience in child welfare*. Ottawa: University of Ottawa; 2006. p. 52–71.
12. Yoder KA, Whitbeck LB, Hoyt DR, LaFromboise T. Suicidal ideation among American Indian youths. *Arch Suicide Res* 2006;10(2):177–190.
13. Whitbeck LB, Hoyt DR, Stubben JD, LaFromboise T. Traditional culture and academic success among American Indian children in the Upper Midwest. *J Am Indian Educ* 2001;40(2):48–60.
14. Pharris MD, Resnick MD, Blum RW. Protecting against hopelessness and suicidality in sexually abused American Indian adolescents. *J Adolescent Health* 1997;21(6):400–406.
15. Wexler LM, DiFluvio G, Burke TK. Resilience and marginalized youth: making a case for personal and collective meaning-making as a part of resilience research in public health. *Soc Sci Med* 2009;69(4):565–570.
16. Zimmerman M, Ramirez J, Wahienko K, Walter B, Dyer S. The enculturation hypothesis: exploring direct and protective effects among Native American youth. In: McCubbin H, Thompson E, Thompson A, editors. *Resiliency in ethnic minority families, Vol. 1. Native and immigrant American families*. Madison: University of Wisconsin; 1994. p. 199–220.
17. Hughes D, Rodriguez J, Smith EP, Johnson DJ, Stevenson HC, Spicer P. Parents' ethnic-racial socialization practices: a review of research and directions for future study. *Dev Psychol* 2006;42(5):747–770.
18. Kvernmo S, Heyerdahl S. Influence of ethnic factors on behavior problems in Indigenous Sami and majority Norwegian adolescents. *J Am Acad Child Adolesc Psychiatry* 1998;37(7):743–751.
19. Kvernmo S, Heyerdahl S. Acculturation strategies and ethnic identity as predictors of behavior problems in Arctic minority adolescents. *J Am Acad Child Adolesc Psychiatry* 2003;42(1):57–65.
20. Bals M, Turi AL, Skre I, Kvernmo S. Internalization symptoms, perceived discrimination and ethnic identity in indigenous Sami and non-Sami youth in Arctic Norway. *Ethn Health* 2010;15(2):165–179.
21. Hassler S, Kvernmo S, Kozlov A. Sami. In: Young TK, Bjerregaard P, editors. *Health transitions in Arctic populations*. Toronto: University of Toronto Press; 2008. p. 148–170.
22. Kvernmo S, Heyerdahl S. Ethnic identity in Aboriginal Sami adolescents: the impact of the family and the ethnic community context. *J Adolesc* 1996;19(5):453–463.
23. Aubert W. The Lappish population in northern Norway (No.107). Oslo: Aschehoug/Universitetsforlaget; 1978. p.139.
24. Hesbacher PT, Rickels K, Morris RJ, Newman H, Rosenfield H. Psychiatric illness in family practice. *J Clin Psychiatry* 1980;41(1):6–10.
25. Goodman R, Meltzer H, Bailey V. The strengths and difficulties questionnaire: a pilot study on the validity of the self-report version. *Eur Child Adolesc Psychiatry* 1998;7(3):125–130.
26. Elias P, Birch M. Establishment of Community-Wide Occupational Statistics. ISCO-88 (COM). A guide for users. University of Warwick, IER: Institute for Employment Research; 1994. p.1–35.
27. Phinney JS. The Multigroup Ethnic Identity Measure: a new scale for use with diverse groups. *J Adolescent Res* 1992;7(2):156–176.
28. Hallett D, Chandler MJ, Lalonde CE. Aboriginal language knowledge and youth suicide. *Cognitive Dev* 2007;22:392–399.
29. Whitbeck LB, McMorris BJ, Hoyt DR, Stubben JD, LaFromboise T. Perceived discrimination, traditional practices, and depressive symptoms among American Indians in the Upper Midwest. *J Health Soc Behav* 2002;43(4):400–418.
30. Hilt LM, Nolen-Hoeksema S. The emergence of gender differences in depression in adolescence. In: Nolen-Hoeksema S, Hilt LM, editors. *Handbook of depression in adolescents*. New York: Routledge Taylor & Francis Group; 2009. p.111–135.
31. Coll CG, Akerman A, Cicchetti D. Cultural influence on developmental processes and outcomes: implications for the study of development and psychopathology. *Dev Psychopathol* 2000;12(3):333–356.
32. Swanson DP, Spencer MB, Harpalani V, et al. Psychosocial development in racially and ethnically diverse youth: conceptual and methodological challenges in the 21st century. *Dev Psychopathol* 2003;15(3):742–771.

Margrethe Bals

Department of Psychology, University of Tromsø

N-9037 Tromsø

NORWAY

Email: margrethe.bals@uit.no