

ORIGINAL ARTICLE

How young people communicate risks of snowmobiling in northern Norway: a focus group study

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ABSTRACT

Objectives. This study aims to understand how the risks of snowmobiling are communicated among northern Norwegian youths.

Study design. A qualitative design with focus group interviews was chosen. Interviews centred on safety precautions and estimation of risks related to snowmobiling and driving patterns.

Methods. Eighty-one students (31 girls and 50 boys) aged between 16 and 23 years from 8 high schools were interviewed in 17 focus groups that were segregated by gender. Interview data were analysed using qualitative content analysis.

Results. Boys and girls communicated differently about risks. Peer-group conformity appeared stronger among boys than girls. Boys did not spontaneously relate risks to their snowmobile activities, while girls did. Boys focused upon training, coping and balance between control and lack of control while driving. Girls talked about risks, were aware of risks and sought to avoid risky situations, in contrast to boys. Boys' risk communication in groups was about how to manage challenging situations. Their focus overall was on trying to maintain control while simultaneously testing their limits. Three risk categories emerged: those who drive as they ought to (mostly girls), those who occasionally take some risks (boys and girls) and those who are extreme risk-takers (a smaller number of boys).

Conclusions. Perceptions of and communication about risk are related to gender, peer group and familiarity with risk-taking when snowmobiling. Northern Norwegian boys' driving behaviour highlights a specific need for risk reduction, but this must also draw upon factors such as acceptance of social and cultural codes and common sense related to snowmobiling.

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INTRODUCTION

The snowmobile was introduced in Norway around 1960 to assist in reindeer herding. Over the decades that followed, use of the vehicle became fashionable even outside this original purpose. Today, the snowmobile is an essential presence in the winter leisure activities of residents in many northern areas (1–3).

Movies found on the website Youtube.com under the keywords “snowmobile,” “snowmobiling,” “hill climbing,” “boondocking,” “wheelie” and “accidents” provide solid proof that snowmobiling is an important everyday winter activity for youths in several parts of the world. Many of these films are produced by young people who depict their own snowmobiling activities, and thus the videos enable Internet-based communication between young people from around the world. Risk-taking, operating vehicles under different and difficult terrain and weather conditions are common themes found in such communication. Young people seek out snow-covered terrain to experience excitement, to be challenged to master control of the snowmobile and the terrain and, in some cases, to experience the “scooter feeling” (3). They search for the optimal route, they “drop” (they get to the top of a steep slope, choose the track, move their body weight to the front of the snowmobile, accelerate and fall off in control) and they seek powder snow with the same playfulness and enthusiasm as the snowboarders described by Telseth (4). Both snowboarders and snowmobilers may develop exercises that can be described as extreme sports (5). Today, youths seek out challenges in nature in order to master snowmobiling and use approaches that are different from those used in the past, and seek to socialize with peers in ways that were not common among previous generations.

Snowmobile driving is regulated by law and is permitted on officially demarcated tracks for people older than 16 (6,7). Northern Norway has a special police service and a nature inspectorate which, among other things, participate in the monitoring of snowmobiling. The geographical area of this research project, with a population of 82,950 and occupying a territory of around 121,600 km², features approximately 6,500 km of legal tracks (8–10). There were 63,631 registered snowmobiles in Norway in December 2008, out of which 26,816 were registered in Troms, Finnmark and Svalbard (11).

The use of the snowmobile entails the risks of accidents and injury. In Svalbard, snowmobile accidents resulting in injuries have been catalogued and reported since 1997 (12), and in western Finnmark since 2002 (13). In western Finnmark, boys aged 15–24 years appear in the injury registry as the group most frequently involved in snowmobile accidents that require medical treatment. Corresponding figures for Svalbard citizens identify men aged 20–29 years as those most exposed to snowmobiling injuries. There is a lack of knowledge regarding how young drivers perceive and cope with risks during snowmobiling. According to Featherstone (14), young boys often seek high-risk activities to test their own limits, stamina and masculinity. While boys' lives are influenced by risk-taking, girls' everyday lives are characterized by care and reproduction. The boys test their own masculinity through these high-risk competitions in which their goals are to assert themselves and enhance their status within the group (15).

According to Douglas' theoretical perspective on risk acceptability, the subjects' own experiences, containing subjective, cultural, historical and social dimensions, determine acceptable attitudes and actions (16). Her approach is especially

suiting for understanding the context in which risk is negotiated, and it explains how risk-taking manifests itself in peer groups. Her approach is supported and elaborated upon by Tulloch and Lupton (17).

Risk communication is a complex process that aims to reduce or eliminate risk. One form of risk communication is advice from experts featured in mainstream media, which typically is aimed at groups or communities (18). Risk communication also occurs in groups that indulge in a specific activity (5). Each member of the group contributes to the definition of how the group estimates and relates to the risk to which it is exposing itself. Simultaneously, group norms play a role in defining each individual's risk perception. Group members may ignore outsiders' perceptions of manifest risks attached to the activity and encourage each other to perform the activity (16). Conversely, frequent reports of accidents and injuries in local newspapers every winter encourage public discussions on risks in snowmobiling (19,20).

This paper studies how risk is communicated as a theme in focus group interviews about snowmobiling. The practical goals of this paper are to contribute to knowledge regarding snowmobiling risk and to strengthen the base for injury prevention strategies.

The concept of risk as it relates to this project is defined as "driving behaviours that increase the probability of losing control of the snowmobile." This broad definition includes elements such as speeding, hill climbing, jumping and dropping. From the drivers' points of view, risk can be seen as taking chances at something that would bring pleasure and gain, but could also cause loss and discomfort. Risk-taking may induce feelings of happiness and could reward the drivers with new and positive experiences (3,21).

MATERIAL AND METHODS

Between January and April 2008, the first author interviewed 81 students at 8 schools. There are 12 high schools in the geographical research area with a total student population of 2,386. The schools were selected according to size and geographical distribution, with the intention of involving youths from across the entire geographical research area.

Context and participants

Focus group participants aged 16–23 years were recruited. They were selected by teachers with knowledge of the students' use of snowmobiles. The first author presented the research project to the classes and asked for students who drove snowmobiles in their spare time to volunteer for participation. Seventeen focus groups, segregated by gender, were formed. Group sizes varied from 2 to 8 participants. There were 10 groups of boys, with a total of 50 participants, and 7 groups of girls with a total of 31. Participants were interviewed about their motivations for driving a snowmobile, planning of trips, driving styles, trip habits, involvement in accidents and whether or not they focused on risks related to snowmobiling. The project was approved by the Norwegian Social Science Data Services (NSD) and the school principals gave permission for the students to be interviewed. The student subjects were informed that participation was voluntary, that they had the right to withdraw from the study without having to state a reason and that confidentiality and anonymity were guaranteed. Those who agreed to participate formally consented to these terms.

Focus group interviews

Focus group interviews are used to study content, which means group members' purposes, thoughts, beliefs and arguments over the specific topic under

study, as well as the interaction between group members (22,23). During focus group interviews, it may be difficult for individuals to resist strongly defined viewpoints and to speak their own minds. Groups were separated by gender to avoid boys dominating girls with comments, humour and irony – an eventuality that has been established in an unrelated study of northern Norwegian boys’ constructions of masculine identity (24) – and to better identify gender differences.

The interviews followed a standard guide, with open-ended questions formulated on the basis of available research and the first author’s practical observations of driving behaviour and risk-taking in the geographical area prior to the interviews. The first author was a moderator in the focus groups, and the participants were encouraged to share and elaborate upon their experiences and perceptions about different aspects of snowmobiling, including risk-taking.

Content analysis

Results are based on a content analysis of the students’ risk communication related to snowmobiling. We identified 13 main topics and a number of subtopics, guided by Graneheim and Lundman’s (25) analysis method. All text from the interviews (about 90,750 words) was subjected to analysis. The interviews were read several times with the aim of identifying units of meaning that could be condensed. The underlying meaning of each individual statement was subjected to interpretation. Subtopics emerged and were correlated with main topics. An example of such an analysis is given in Table I. The interviews contained many similar topics, and after 14 interviews no new topics had emerged. The co-authors independently checked the development of themes and interpretations. To this end, the co-authors read five of the transcribed interviews as well as the first author’s content analysis, and followed

Table I. An example of how subtopics were prepared in our analysis.

| Meaning units | Condensed meaning unit | Interpretation of the underlying meaning | Subtopic | Main topic |
|--|---|--|---------------------------------|---|
| <p>“Think about when we dropped off that snowdrift in the valley. Oh my God, that was probably 300 metres up the slope... Yeah, that’s a pretty high mountain. And afterwards I just thought...landed a bit crooked...so afterwards I just thought, damn it, how stupid can you be... (laughing).”</p> | <p>Testing a hill, failed, losing hold of the snowmobile when trying to do an away manoeuvre.</p> | <p>Knowledge of strategies for coping, which include risk of losing control.</p> | <p>Control/lack of control.</p> | <p>Risk related to control and lack of control.</p> |
| <p>“If you are with your friends you should be the furthest up the hill, jump the highest, the longest jump, push each other...”</p> | <p>Boys are competitors and challenge each other in peer groups.</p> | <p>Testing skills and performance in peer groups.</p> | <p>Peer group pressure.</p> | <p>Risk as a peer-group-related activity.</p> |

Table II. Main topics about students’ communication of risk in snowmobiling.

- Risk as a gender-related activity.
- Risk as a peer-group-related activity.
- Risk related to control and lack of control.
- Risk related to illegal behaviour.

this with discussions until consensus on analysis and interpretations was reached. The remaining interviews were analysed by the first author and themes and interpretations were discussed with the co-authors until consensus was established. Four main topics that emerged from the data are included in this paper: risk related to gender, peer group, control and lack of control and illegal driving behaviour (Table II).

RESULTS

Risks related to gender

The groups of girls tended to disagree and vary their points of view more than the boys in the focus group interviews. They offered statements that seemed to establish formal regulations. One girl said: "I neither drive when I'm drunk, nor am I passenger on the snowmobile when the driver is drunk." Another girl stated: "I never drive out of the tracks." Boys seldom made explicit statements like this, even though some of them admitted to driving off the tracks and occasionally driving while drunk.

The boys used humour, irony, sarcasm and teasing when commenting on each other's snowmobile expertise and driving skills. The girls did not.

Nearly all of the groups of girls spontaneously started discussing risks without the interviewer explicitly introducing the topic, whereas most of the groups of boys did not. The girls associated risk assessment with routine trip preparations, mastering the snowmobile, heeding weather conditions and not driving alone. They showed consideration towards other people and were uncomfortable with physical challenges posed by difficult driving conditions. Unlike the boys, the girls did not seek out risks, except when

they drove with boys and were challenged, for example, to climb the same peaks. Both genders considered withdrawal from extreme challenges to be acceptable. Both boys and girls stated that boys wanted to show off their snowmobile abilities. The boys would directly or indirectly challenge each other; one driver would stop in front of a challenge, assess the terrain, the risks and possibilities, and then commence with driving through it. This would encourage the others to eventually follow suit.

The girls did not show a proclivity for such challenges, but some of them would on the rare occasion test their driving skills together without boys present if they considered the activity to be fun. Typical examples were driving on one ski in powder snow, jumping and climbing a slope. The boys and girls had equally stigmatized views of each other. The boys stated that the girls were careful, obedient drivers who slowed down the group if they drove together. The girls stated that the boys drove carelessly and took many risks. If the girls were to ride as a boy's passenger, they would try to influence their driving by, for example, thumping them on the back if they drove too fast, although they were also aware that most boys would ignore this. Both boys and girls said that it was positive to be perceived as a good snowmobiler who could master the vehicle.

The majority of the boys evaluated risk in relation to three main considerations: (1) where were the best conditions for driving that day, (2) did they have enough fuel, a sufficient supply of spare tracks and spark plugs and (3) was there a risk of running into a police control that day, and if so, where? By contrast, the girls were interested in (1) good weather, (2) being able to stop to make a campsite or to light a fire, (3) having a good time and (4) being able to drive with somebody else.

Risk as a peer group activity

Girls and boys often drove together. Both identified increased safety in facing the risks of avalanches or technical failures of the snowmobiles as reasons for driving together rather than alone. However, if someone in the snowmobiling group sought out a challenge – for instance climbing a slope or jumping – they communicated little about these intentions. The boys made individual assessments regarding prospects of mastering, of having control and of making good track choices before they started. If one of them successfully surmounted the challenge, the others could then make an attempt. Communication about risks and driving challenges primarily occurred in retrospect. When this occurred, it was with a positive focus on how they had chosen tracks, how they had assessed the snowmobile's capacity in relation to the challenge and how it all almost went wrong, but how they nevertheless met the challenge. Several of the boys stated that they experienced group pressure, and during the interviews they teased each other about types of snowmobiles, snowmobile capacity, engine strength and challenges of the terrain. The focus group interviews revealed that boys and girls focused on risk under different premises. These premises emerged internally in the groups depending on gender, how experienced they were as drivers and who they were driving with.

Risk communication related to "control and lack of control"

During the transcription of the interviews, it became obvious that for the boys risk was an *unspoken theme* to a greater extent than it was for the girls. Responding to direct questions about risks involved with driving snowmobiles, the boys communicated that while it could be risky, they could handle most challenges provided that they had training and detailed knowledge of driving

conditions. The boys said that their attention first and foremost was directed towards preventing accidents and damage to the snowmobile, rather than towards preventing personal injuries. They believed that if they were to think about risk all the time the pleasure of the trip would disappear, so they did not needlessly concern themselves with risk.

Both boys and girls were preoccupied with having control over their vehicle and the technical situation when they were driving. The boys, however, challenged the limits of having control more than the girls. The boys' stories were clearer and more powerful than the girls' when it came to descriptions of situations where they at first had control and then lost it. "Testing" and "mastering" are terms that emerged as suitable descriptors of the boys' driving behaviour. They sought risky situations and talked about how they identified the risks of these situations and how the possibility of loss of control was something they factored into their attempts at mastery. In summary, boys and girls had different ideas of having control and being out of control – and about the substance of control. The girls said they were preoccupied with maintaining control from start to finish, and many did not seek out situations where there was risk of losing control.

Here are two narratives connected to the boys' statements about "dropping" and slope climbing, which illustrate how such events can lead to losses of control:

"Think about when we dropped off that snow-drift in the valley. Oh my God, that was probably 300 metres up the slope... Yeah, that's a pretty high mountain. And afterwards I just thought... landed a bit crooked... so afterwards I just thought, damn it, how stupid can you be...(laughing)."

“Sure, several others had been there...so I tested it. Got stuck and had to drive off. Then I lost the snowmobile. Probably 200 metres down, but I survived. There was barely any damage (on the snowmobile), barely anything. That was the first and the last time.”

While such escapades were the norm among the boys, only one of the girls told a similar story. She had unexpectedly found herself stuck on a slope with ocean surf just below – a hazardous situation which could have led to a fatal injury.

Illegal driving behaviour among “the others” and themselves

The role of the police in the mountains was something that was discussed in almost all of the groups. Both girls and boys reasoned differently about what they perceived to be legal in connection with snowmobiling. The youths had different attitudes towards the authority of the police and their role in regulating snowmobiling, and many of them paid attention to where the police were. All groups, with the exception of one group of boys and one group of girls, generally respected the task of the police and obeyed the law. Some of the youths in the one group of boys that ignored the authority of the police gave the impression that they liked to challenge the police if they knew they had a good opportunity to outwit them. The group of girls that ignored the police’s authority did not take part in such activities, but appeared to be connected to a subculture in which this attitude was common. If one of these girls found herself riding behind a boy who was running from the police, she knew she had to hang on until they stopped because there would be no one to take care of her if she fell off the snowmobile. Normally, the one who planned to do a runaway made an assessment in advance regarding the size of the police vehicle,

who was driving it and what terrain they were in. They did not run if they knew that the police had the equipment and drivers to catch up with them. If they did choose to run, it was expected that the police would behave “sensibly” and pull out of the chase before the runaway driver was caught. The reasons for running away could be that the driver did not have registration plates or a driver’s license, that the driver was intoxicated, that they were driving outside the marked trails or simply that they wanted to challenge the police. The “winner” – someone who got away successfully – would cherish the opportunity of talking about his victory with other adolescents.

Several of the groups stated that some snowmobilers, both young and old, drove under the influence of alcohol between huts and camp tents at night to seek out parties.

DISCUSSION

This is a small-scale study with a convenience sample that is not representative in a statistical sense. Furthermore, a focus group design with separated gender groups gives a special type of data, which could be supplemented by individual interviews or a heterogeneous group design. This would open for comparison the statements made in different settings. However, our study includes youths from a wide geographical area, and the data therefore display variations as well as detailed and typical stories that contribute to the data’s strength and trustworthiness.

Boys, girls and peer groups – snowmobiling and talking about risks

The gender difference found in our study supports earlier findings about girls and risk-taking (14,26). These findings corroborate results

from Ulleberg's survey (27) where he found that girls were more likely to speak out to the driver in a car if they felt unsafe.

Many of these youths have been raised in a culture and social context that includes mountain trips with snowmobiles, and they have learned the laws, rules and safety measures that are involved in this activity. How they relate to these as independent participants depends on how they have been socialized into the practice and how they interpret and act on the social, historical and legal codes surrounding it. However, this knowledge may also be challenged in peer group contexts. The individual's understanding of risk is brought into the group and discussed and refined there (16,17).

Being identified as a good snowmobiler brings a higher status. For the boys, this was about positioning themselves in their peer environment. This illustrates the relationship between the identity development that gives boys social status in their groups, and the methods they have available to accomplish this (15,24). Their tendency to avoid police controls could also indicate that some of the boys wanted the mountain areas at their disposal without intervention.

Control and lack of control – a balanced contradiction

Taking risks while snowmobiling is a goal and a norm for some boys when they go on trips. Their marginalization, negligence and antagonism of risks are consistent with theories about gender-related risk assessment (5,14). This demonstrates how seeking out and mastering risks helps expand the individual's subjective experience of mastering a risk area (16,17).

The individual's experience of controlling risk factors in conjunction with their interpretation of terrain, weather and driving conditions is important in mastering a given situation, and involves a

calculated risk that boys are especially willing to take. However, when an individual practises an activity and knows the risks associated with it, he or she can move boundaries so that there is a systematic underrating of the real risk of the activity. The interpretation and understanding of risk is therefore expanded according to Tulloch and Lupton (17). Douglas also points out that the culture's standard for acceptable risk requires members of the culture to take responsibility (16). How boys and girls talk about and administer responsibility is affected by local opinions and knowledge about snowmobile driving and depends on gender, but is also challenged in the peer group. As well, there is a relationship between having control and losing control. The boys continuously try to balance these two feelings while snowmobiling. Therefore, it becomes important for boys to show others and themselves that they have gained control and mastered the snowmobile in different contexts, and this becomes significant for their identity. The embodied and tacit knowledge they establish about risk connected to snowmobiling crystallizes and becomes available, for others and for themselves, when these experiences are made explicit and articulated.

According to Douglas (16), risk acceptability is developed within a social context where the peer group – especially among boys – defines social codes and acceptable risk levels and is included in what she calls the group's own coding of perceptual risk. What is acceptable driving behaviour and acceptable risk-taking within a certain type of activity is ultimately subject to the reality in which definitions are contested. The boys, on this backdrop, develop a common social, practical and cultural acceptance of risk-taking that may inspire individual risk-taking (3,5,16). This could be one explanation why more boys are involved in snowmobile accidents than girls.

Playing with the police, stigmatization and interrupting common sense in the community

It is possible that the subjects of the study who participated in illegal activities were residents of geographical areas where the police are generally absent. These subgroups may have developed their own internal logic that is in conflict with the common conventions and legal definitions for driving behaviour. Alternative norms can create dangerous situations and expose those who act on these norms, as well as those around them, to snowmobile accidents. Despite the fact that youths in our study seldom were seriously injured when they lost control while snowmobiling, hazardous driving is not accepted in the local society to which they belong (19,20).

In summary, communication about risks related to snowmobiling is a gender-divided practice, where girls assessed risks connected with snowmobiling more directly than boys. Risk-taking can be separated into three categories. The first contains both boys and girls who drive according to the law and take a minimal number of risks. The second has boys and very few girls who sometimes drive on the borderline and test themselves and their snowmobiles. The third comprises the extreme risk-seeking boys who expose themselves and others to dangers through marginal snowmobiling behaviour. To subdue the voluntarily increased risk-taking in snowmobiling (which is most powerfully represented by this last category), it is necessary to change the codes for what is socially, legally and culturally acceptable. These shifts need to be especially directed towards the boys in northern Norway who demonstrate the most extreme snowmobiling behaviour. Prevention of high risk situations and promotion of safe driving behaviour could take place both

formally, through tools such as police controls, and informally through arranged focus group discussions with gatekeepers and role models. These two important themes could be made a part of the driver education program, could be introduced as a separate subject for discussion in voluntary associations or could become part of the multi-professional health promotion and empowerment strategies that involve northern adolescents' leisure activities.

The strategy that emerges is one that focuses on changing attitudes, removing risky driving behaviours and fostering a more open discussion about rules, the law and the consequences of breaking the law. The main goals of this strategy are injury reduction and prevention.

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Conflict of interest statement

No conflict of interest.

REFERENCES

1. Mehus AG, Mehus G, Germeten S. Delrapport 1: Snøscooter og trafikksikkerhet – litteraturgjennomgang av kunnskap knyttet til snøscooterulykker i Skandinavia, USA og Canada [Snowmobiles and traffic safety – a review of literature connected to snowmobile accidents in Scandinavia, USA and Canada]. Alta: Høgskolen i Finnmark 2008, Report No. 4. 43 p. [in Norwegian]
2. Pedersen K. Med snøscooter som livsform [With snowmobile as lifestyle]. In: Pedersen K, Gerrard S. Kjønn, kultur og regional endring. Nye perspektiver på distriktskvinneforskning [Gender, culture and regional variation. New perspectives on rural women]. Rapport nr. 6. Alta: Alta Lærerhøgskole, Finnmarksforskning, NIBR og Finnmark distriktshøgskole; 1992. p. 110–126. [in Norwegian]
3. Mehus G, Germeten S, Henriksen N. Snøscooterkjøring og scooterfølelsen [Youth, snowmobiling and the "snowmobile feeling"]. Tidsskrift for ungdomsforskning 2010;10(2):39–56. [in Norwegian]

4. Telseth F. Dra på. Bidrag til en forståelse av frikjørens og frikjøringsfenomenets meningsdimensjoner [Push it. A contribution towards understanding the free-driving phenomenon]. Bø in Telemark: Høgskolen i Telemark; 2005. 152 p. [in Norwegian]
5. Breivik G. Risikoatferd og jakten på spenning [Risk behavior and chasing action]. In: Thelle DS, Breivik G, Enebakk V, Skolbekken JA, Teigen KH, editor. På den usikre siden [On the risky side]. Oslo: Cappelen Akademiske forlag; 2001. p. 133–158. [in Norwegian]
6. Lov om motorferdsel i utmark og vassdrag. LOV-1977-06-10-82 (Jun 10, 1977). [Motor Traffic on Uncultivated Land and in Watercourses Act of 1977, Pub. L. 82 Stat. 1977] [cited 2011 Mar 23]. Available from: <http://www.lovdata.no/all/nl-19770610-082.html>. [in Norwegian]
7. Vegtrafikkloven. LOV-1965-06-18-4 (Jun 18, 1965). [Road Traffic Act of 1965, Pub. L. 4. 1965 Stat. 1965.] [cited 2011 Mar 23]. Available from: <http://www.lovdata.no/all/nl-19650618-004.html>. [in Norwegian]
8. Statistisk sentralbyrå. Befolkningsstatistikk [Statistics Norway, Population in North Troms and Finnmark Jan 1, 2010]. Oslo: Statistisk sentralbyrå; 2010 [cited 2010 Nov 17.] Available from: <http://www.ssb.no/folkemengde>. [in Norwegian]
9. Fylkesmannen i Finnmark. Snøscooter- og barmarksløyper i Finnmark – kart og GPS [Snowmobile- and dryland tracks in Finnmark – maps and GPS]. Vadsø: Fylkesmannen i Finnmark; 2009 [cited 2010 Aug 1]. Available from: <http://www.fylkesmannen.no/fagom.aspx?m=1983&amid=1057613>. [in Norwegian]
10. Fylkesmannen i Troms. Snøscooterløyper i Troms [Snowmobile tracks in Troms]. Tromsø: Fylkesmannen i Troms; 2010 [cited 2010 Aug 1]. Available from: <http://www.fylkesmannen.no/fagom.aspx?m=19028&amid=1271904>. [in Norwegian]
11. Uttrekk fra det Sentrale Motorvognregister [Statistics ordered from Central Motor Registry, Norway]. Oslo: Sentrale Motorvognregister; 2008 Dec 31. [in Norwegian]
12. Ytterstad B, Dahlberg T. Snøscooterskader på Svalbard [Snowmobile injuries in Svalbard]. Tidsskr Nor Laegeforen 2005;125(23):3252–3255. [in Norwegian]
13. Jeppesen E, Wisborg T. Skader fra bruk av snøscootere i Vest-Finnmark [Snowmobiles and serious injuries in western Finnmark]. Tidsskr Nor Laegeforen 2005;125(23): 3248–3251. [in Norwegian]
14. Featherstone M. Undoing culture: globalisation, post-modernism and identity. London: Sage Publications Ltd.; 1995. 178 p.
15. Hvalstad M. Gutter i et komplisert samfunn [Boys in a complex society]. In: Haavet OR, editor. Ungdomsmedisin [Youth Medicine]. Oslo: Universitetsforlaget; 2005. p. 82–85. [in Norwegian]
16. Douglas M. Risk acceptability according to the social sciences. New York: Russell Sage Foundation; 1985. 115 p.
17. Tulloch J, Lupton D. Risk and everyday life. London: Sage Publications Ltd.; 2003. 137 p.
18. Bier VM. On the state of the art: risk communication to the public. Reliability engineering & system safety 2001;71(2):139–150.
19. Nielsen B. Livsfarlig scooterkjøring i fjellet – gambler med livet [Life-threatening snowmobiling in the mountains – gambling with life]. Nordlys (newspaper) 2008 Mar 17. [in Norwegian]
20. Østlyngen R. Scooterjakt på livet løs [Chasing snowmobiles at the risk of life]. Altaposten (newspaper) 2009 Jan 24. [in Norwegian]
21. Csikszentmihayli M. Flow: The classic work on how to achieve happiness. London: Rider; 2002. 303 p.
22. Morgan DL. Focus group interviewing. In: Gubrium Jaber G, Holstein JA, editors. Handbook of Interview Research, Context & Method. Thousand Oaks: Sage Publications Ltd.; 2001. p. 141–160.
23. Kvale S. Den kvalitative forskningsintervju [The qualitative research interview]. Lund: Studentlitteratur AB; 1997. 206 p. [in Norwegian]
24. Paulgaard G. Ungdom og kjønn i endring? Ungdom, humor og maskulinitet på 71 grader. [Youth and gender in change? Youth, humour and masculinity at 71 degrees North]. Maskulinitet i nord 2007;6:207–222. [in Norwegian]
25. Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today 2004;24(2):105–112.
26. Oltedal S, Rundmo T. The effects of personality and gender on risky driving behaviour and accident involvement. Safety Science 2006;44(7):621–628.
27. Ulleberg P. Social influence from the back-seat: factors related to adolescent passenger willingness to address unsafe drivers. Transportation Research Part F: Traffic Psychology and Behaviour 2004;7(1):17–30.

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