Sociodemographic correlates of fear-related attitudes toward the wolf (*Canis lupus lupus*). A survey in southeastern Norway

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The recent increase in the grey wolf *Canis lupus* population in Norway has led to an intense debate about the management of this species. A telephone survey of fear-related attitudes toward the wolf was conducted in four counties in south eastern Norway. 52% claimed that they not at all, or to a small degree, would become concerned about their own or their family's safety when being outdoors if wolves were living in their area, while 31% said they clearly would become more concerned. 36% of the sample expressed that they definitely would become more careful when walking in the fields and forest, 25% partly agreed to this, while 38% said they would not become more careful. 25% said they were very much afraid of wolves, 30% were somewhat afraid, while 43% were not afraid at all. Generally, women, the elderly, persons with short education, and rural inhabitants expressed more negative, fear-related attitudes than did other sociodemographic groups. Parents with young children expressed more fear of wolves compared to equally old parents without children at home, but this finding applied only to residents in the city. People who had a dog in their household were less afraid of wolves than those who did not have a dog; this applied only to rural residents. In general, the level of self-reported fear and concern equals what has been found in Sweden and Finland, but the attitudes found in Norwegian rural areas were more negative than attitudes of rural residents in Sweden. The results are discussed on the background of evolutionary/genetic, cultural, and political influences.

Key words: Canis lupus lupus, wolf, attitudes, fear

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INTRODUCTION

While human attitudes toward the wolf probably were positive at the hunter-gathering stage of our evolution, they changed with the keeping of domestic animals (Zimen 1981). For centuries after the development of agriculture, negative perceptions of the wolf resulted in the extirpation of the species from large parts of Europe and North America. During the last 50 years, however, a remarkable transformation in attitudes toward the wolf has occurred among specific groups of the population in several countries. Surveys have revealed positive attitudes toward wolves among people in urban areas, and among younger and better educated persons, while they tend to be more negative among farmers, the elderly, persons who grew up with livestock production, and rural inhabitants in general (Kellert 1985, 1991, Bjerke et al. 1998a). These conflicting attitudes do not simply reflect different interests or values between urban and rural groups, since the variables of age, education, and gender correlate with the attitudes toward wolves within one particular rural community. Thus, within rural municipalities in Norway where the livestock vs. large carnivore conflict existed, Bjerke & Reitan (1994) showed that the proportion wanting wolves extirpated or reduced increased with increasing age and decreasing education. Of the total sample, 14% wanted wolves extirpated, 37% wanted a reduction of the present population, 40% wanted it maintained, and 7% wanted an increase. And among young informants in a nearby rural community, Skogen (2000) found all typical views of the conflict to be present. Middle-class youngsters in academic training often were in favour of the large carnivores, while boys with a working class or farming background more often expressed negative attitudes toward the species. Children are affected by the debate about carnivores at an early age. 10-15-year-olds in municipalities where the debate is intense express a more negative perception of the carnivores

than do children and adolescents from other localities (although 50-60% of those living in conflict areas nevertheless wish to see a wolf when being out in nature) (Bjerke et al. 1998b).

The importance of the above-mentioned social and demographic variables for attitudes toward wolves indicates that the livestock vs. large carnivore conflict partly revolves around diverging economic interests, and possibly is related to different views on how we should use and manage natural resources in general. Sheep farmers and their related groups obviously are concerned about the economic prospects in agriculture, and about the suffering of their livestock. One study showed that the deeper the attachment farmers had for their livestock, the more negative were their attitudes toward predators (Vittersø et al. 1998). Farmer's anticipated consequence for future sheep farming if the depredation continues also reveal strong predictive potentials toward the attitudes toward large carnivores (Vittersø et al. 1999). Such findings clearly show those aspects of the livestock vs. large carnivore conflict that are fuelled by diverging economic interests.

This conflict of interests is also associated with differences in how the conflicting groups express their concern about environmental problems. In a survey among sheep farmers, research biologists, and wildlife managers (Bjerke & Kaltenborn 1999) it was shown that all three groups endorsed *ecocentric* values (concern for animals, ecosystems, and the biosphere even though conservation involves human sacrifice). Such endorsement was lower, however, among the sheep farmers than among the biologists and the wildlife managers. In addition, sheep farmers had higher scores on measures of *anthropocentric* values, which implies a higher priority given to human utilitarian needs when protection of the environments is at issue. Thus, all three occupational groups value nature, but for somewhat different reasons.

But conflict of interest and their associated environmental values can not explain the negative attitudes toward large carnivores that are expressed within groups *without* material interests in the issue whatsoever. We can identify at least three dimensions within a negative attitude toward animals. A) a *utilitarian* dimension (an interest in the utilisation of the animals, or subordination of them and their habitat for the practical benefit of humans), B) a *dominionistic* dimension (mastery, control, and dominance of the animals, for example in sport hunting), and C) a *negativistic* dimension (fear, dislike, or indifference toward the animals) (Kellert 1991, see also Vittersø et al. 1999). Thus, different motives may exist for having a negative attitude toward wolves. Some groups may mainly have utilitarian motives, while other groups primarily may be afraid of them. It is well known that women express substantially more fear and indifference toward animals in general than men do (Kellert & Berry 1987). In a representative sample of the Norwegian population surveyed by Dahle (1987) women more than men were negative toward the large carnivores. This tendency is evident early in life. Compared with girls, boys think that wild animals (carnivores included) are prettier, more exiting, less scary, and less dangerous. Similarly, girls dislike invertebrates more than boys do (Bjerke et al. 1998b). Thus, gender is expected to have an important demographic influence on attitudes toward the wolf.

Epidemiological and clinical studies further attests to the importance of fear of animals. For example, in an investigation of adolescents, Milne et al. (1995) reported prevalence rates of 14.5 and 22.5% for moderate and mild phobias respectively. Fears of animals were frequently reported; 33% of moderate and 42% of mild phobias were about animals. And in a survey in a Dutch community sample, a large majority of the respondents expressed a fair amount of fear of animals, like snakes (95%), wasps (85%), and rats (78%) (Arrindell 2000). Most often, females have been found to have higher prevalence rates than males have. Most probably, humans are programmed to acquire certain types of fear very easily, and animals that may injure humans could constitute one class of evolutionary fear-relevant stimuli (Öhman 1986, see also Marks & Nesse 1987).

In order to identify groups (other than sheep farmers) that are negative toward wolves, surveys among the general population of Norway are needed. In such surveys urban respondents should also be included, since it would be interesting to know whether the social attitude pattern found in rural areas (Bjerke & Reitan 1994, Skogen 2000, see above) exist also in cities. It would also be of interest to compare the results with those obtained in a recent Swedish survey (Karlsson et al. 1999). This survey showed that more than two-thirds of the respondents accepted a wolf population twice as big as the current one (40-60 individuals) and that more than 40% would accept at least 500 wolves in Sweden. The majority would accept wolves in their vicinity, and people living in areas where wolves existed showed at least the same positive attitude toward this species than did other respondents. The elderly, women, low-income earners and people with lower education were more negative toward wolves than were younger, men, high-income earners and people with higher education. Approximately one third of the respondents expressed concern about their safety outdoors if wolves lived close to where they lived. In a survey in Finland (Lumiaro 1998) 32% of the respondents agreed that they were afraid of wolves.

On this background a survey of attitudes toward wolves was conducted in a representative sample of informants from the counties of Hedmark, Østfold, Akershus, and Oslo in Southeast Norway. In this paper we examine the issue of fear-related attitudes toward wolves and to what extent sociodemographic variables function as correlates or antecedents to such attitudes.

METHODS AND MATERIAL

Sampling and data collection

A total of 1200 persons above the age of 18 years from the counties of Hedmark (162), Østfold (210), Oslo (383), and Akershus (445) constituted the sample in this study. The interviews were conducted by telephone during the last week of June, 2000, by a market analysis firm (Norfakta a/s). The respondents were randomly drawn from Telenor's registry. Fifty eight per cent refused to participate, and the sample was extended until 1200 respondents were interviewed. The results were weighted as to age and sex for each separate region and for the total sample.

The questionnaire

The questionnaire consisted of 11 questions about various aspects of the wolf's presence in Norway (population size, geographic distribution, management, and concern and fear about its presence, see Bjerke & Kaltenborn 2000). The concept of attitude is often defined as the affect connected with the attitude object, i.e., its positive or negative evaluation, thus we will present the analyses of the answers to three evaluative fear-related questions. These questions are:

1) "To what extent would you become concerned about your personal or your family's security outdoors if wolves lived in your home municipality?" The response scale ranged from 1 ("not at all") to 5 ("to a very large extent"), in addition to "do not know".
2) "To what extent would you agree or disagree to the following statement if wolves lived in your home (or neighbouring) municipality: I would become more careful when being outdoors in the fields and forests"? The response scale was: "completely agree", "partly agree", "completely disagree", and "do not know". (The scale was reversed in the statistical analyses).
3) "To what extent are you afraid of the following animal species?" (random order, the species (or group of species) read were: dog, horse, insects, stray dog, wolf, lynx, viper, bear, and moose). The response scale was: "not at all afraid", "a little afraid", "very much afraid", and "do not know". For the present purpose, fear of the wolf will be focused upon.

Analysis:
Distributions of the dependent variables (concern for safety, behaviour, and fear of wolves) were computed as frequencies, means, and standard deviations. The effects of socio-demographic variables on the dependent variables were tested using regression analysis, by use of the program package STATA, version 6.0. Initially, since the study's three dependent variables all were on an ordinal scale, we estimated the multivariate models using ordinal regression analysis (McKelvey & Zavoina 1975, Greene 2000). For ease of interpretation, however, we present the results from analogous OLS regression analyses as they in general gave similar results.

RESULTS

Descriptive statistics for the variables safety concerns, possible change in behaviour due to the presence of wolves, and fear of wolves, are presented in Table 1. About one-half of the sample of the respondents (52%) reported that they would not, or only to a small degree be concerned about safety outdoors if wolves were found within their municipality, while 31 per cent to a large, or very large degree would be concerned. Tables 1 and 2 indicate that there are considerable differences among groups. More women than men were concerned about own and their family's outdoor safety if wolves were present in the municipality where they lived. Second, this kind of concern becomes more frequent as age increases. Third, people living in cities and in densely populated areas were less often concerned about this safety aspect than people living in more scattered areas (the reference category). Furthermore, persons with more education and people who do not have small children in the household were less often concerned than poorly educated and people who have small children in the household (Table 2).

As to the question of whether the respondents would be more careful when using natural areas (forests, uncultivated range, and mountains), we also find a great deal of variation. Almost two-thirds of the sample fully or partly agree to the statement that they would be more careful in moving around in outlying areas (Table 1). Table 2 also shows that more women and elderly would be careful than men and young people. In addition, poorly educated people and people living in rural areas would more often be careful than more educated people and people living in cities.

The amount of fear of wolves also elicits a great deal of variation among the respondents. Approximately one-fourth of the sample claimed that they were very much afraid of wolves, while slightly less than one-half (43%) were not afraid of wolves at all (Table 1). By comparison, 11% were very much afraid and 34% somewhat afraid of the viper, and 26% were very much afraid and 38% somewhat afraid of the bear. As regards differences among groups, Table 2 shows that more women than men were afraid of the wolf. Also, among the elderly, the poorly educated, and among people living in scattered areas more persons were afraid of wolves than the young, the more educated, and people living in cities. Furthermore, of people who have small children in the household more were afraid of these carnivores than those who do not have small children. By contrast, people who have a dog in the household were less often afraid of wolves than those who do not have dogs.

Table 1. Distribution of concern for safety, behaviour changes and fear (in per cent)

		CONCERN FOR ONE'S OWN AND FAMILY SAFETY					
		Not at all	To a limited degree	To some degree	To a large degree	To a very l arge degree	Don't know
N	1200	27.5	24.5	16.0	17.2	13.9	0.9
GENDER	Male	37.1	26.7	13.3	13.1	8.4	1.5
	Female	18.5	22.4	18.6	21.1	19.1	0.4
	χ^2=84.18. p=0.000						
AGE	18-29	32.5	26.6	19.5	10.8	9.7	0.7
	30-49	27.0	28.0	16.9	16.8	10.6	0.8
	50-64	30.5	22.1	12.1	16.1	18.3	0.9
	65+	17.4	15.2	13.8	29.1	23.1	1.5
	χ^2=71.14. p=0.000						
LOCATION	City	31.3	26.9	15.6	15.4	10.3	0.5
	Densely	24.6	24.4	15.7	18.1	15.5	1.7
	Scattered	23.1	18.8	17.9	20.1	19.7	0.4
	χ^2=28.90. p=0.001						
FAMILY TYPE	No children	28.8	24.8	14.7	17.3	13.4	1.0
	Small children	21.5	23.3	21.5	16.6	16.6	0.4
	χ^2=10.87. p=0.05						

		CHANGE IN BEHAVIOUR IN THE PRESENCE OF WOLVES			
		Absolutely agree	Partly agree	Partly disagree	Don't know
N	1200	36.2	24.5	38.4	0.9
GENDER	Male	23.8	22.4	53.2	0.6
	Female	47.7	26.3	24.7	1.2
	χ^2=114.5. p=0.000				
AGE	18-29	30.9	31.5	36.2	1.4
	30-49	31.3	23.3	45.3	0.1
	50-64	32.8	23.4	42.8	1.0
	65+	60.9	18.6	18.3	2.2
	χ^2=81.50. p=0.000				
EDUCATION	Primary	51.5	18.7	27.3	2.5
	Secondary/general	37.6	32.4	29.5	0.5
	Secondary/technical	38.6	17.3	42.6	1.5
	University/college	28.8	26.7	44.1	0.3
	χ^2=72.10. p=0.000				

		FEAR OF WOLVES			
		Not afraid	Somewhat afraid	Very much afraid	Don't know
N	1200	43.0	29.8	24.5	2.7
GENDER	Male	56.5	28.8	11.4	3.3
	Female	30.3	30.8	36.7	2.3
	χ^2=127.84. p=0.000				
AGE	18-29	46.0	33.0	17.4	3.6
	30-49	46.0	31.6	21.0	1.4
	50-64	42.7	29.7	23.6	4.1
	65+	30.5	20.9	45.5	3.2
	χ^2=69.30. p=0.000				
COUNTY	Østfold	37.8	32.5	28.7	1.0
	Akershus	42.7	27.4	25.4	4.5
	Oslo	49.1	30.0	19.1	1.8
	Hedmark	36.0	32.3	29.8	1.9
	χ^2=25.54. p=0.002				

Table 2. Three aspects of fear of wolf by independent variables. OLS regression results.

Independent variables	Concerned about safety		More careful		Afraid of wolf	
Male	-0.657**	(0.080)	-0.442**	(0.048)	-0.527**	(0.044)
Age	0.015**	(0.003)	0.006**	(0.002)	0.007**	(0.001)
Education	-0.078*	(0.031)	-0.079**	(0.019)	-0.066**	(0.017)
Small children	0.282*	(0.111)	0.001	(0.067)	0.130*	(0.061)
Dog in household	-0.004	(0.092)	-0.069	(0.056)	-0.143**	(0.051)
Østfold	0.186	(0.099)	0.045	(0.060)	0.113*	(0.055)
Hedmark	0.114	(0.104)	-0.053	(0.063)	0.109	(0.058)
Densely populated	-0.233*	(0.104)	-0.107	(0.063)	-0.014	(0.058)
City	-0.466**	(0.107)	-0.180**	(0.065)	-0.118*	(0.060)
Constant	2.746**	(0.210)	1.718**	(0.128)	1.974**	(0.117)
Observations	1174		1177		1162	
R-squared	0.12		0.11		0.16	

Note. Unstandardised regression coefficients. Standard errors in parentheses.

*p < .05. **p < .01.

To examine the urban-rural dimension in the diversity of attitudes toward the wolf, we also estimated separate models for people living in urban (city areas) and rural environments (densely and/or scattered populated areas). This type of analysis indicates whether or not the effects of gender, age, etc. on the attitudes toward the wolf appear to be general or specific according to people's home environment. Regarding the concern about one's own and family's security, the effect of education seemed to be significant in urban areas only. That is, we found a higher proportion of those not so concerned about safety among people with a longer education in general only in the urban part of the population. We also found that more people who have small children in the household and live in urban areas were concerned about their safety than people in urban areas who do not have small children in the household (Table 3).

No differences were found between the urban and the rural environments about being more careful when walking about the woods and the fields. On the issue of fear of the wolf, we found two notable differences. First, only people who have small children in the household and live in urban areas appeared to be more often afraid of the wolf than those who do not have small children. Second, people who have a dog in the household (n = 264) were less often afraid of the wolf than those who do not have a dog, only if they live in rural environments (Table 4).

Table 3. Concern about one's own and family outdoor safety by independent variables. Urban and rural environments. OLS regression results.

Independent variables	Urban		Rural	
Male	-0.682**	(0.124)	-0.643**	(0.104)
Age	0.018**	(0.004)	0.012**	(0.003)
Education	-0.149**	(0.048)	-0.037	(0.042)
Small children	0.531**	(0.174)	0.131	(0.145)
Dog in household	-0.015	(0.168)	0.023	(0.111)
Østfold	0.045	(0.142)	0.301*	(0.138)
Hedmark	0.032	(0.173)	0.238	(0.131)
Constant	2.385**	(0.302)	2.554**	(0.257)
Observations	446		728	
R-squared	0.15		0.08	

Note. Unstandardized regression coefficients. Standard errors in parentheses.
*p < .05. **p < .01.

Table 4. Fear of wolf by independent variables. Urban and rural environments. OLS regression results.

Independent variables	Urban		Rural	
Male	-0.498**	(0.069)	-0.549**	(0.057)
Age	0.008**	(0.002)	0.007**	(0.002)
Education	-0.063*	(0.027)	-0.068**	(0.023)
Small children	0.247*	(0.096)	0.067	(0.080)
Dog in household	-0.141	(0.095)	-0.141*	(0.061)
Østfold	0.017	(0.079)	0.199**	(0.077)
Hedmark	-0.009	(0.095)	0.185*	(0.073)
Constant	1.849**	(0.168)	1.953**	(0.143)
Observations	444		718	
R-squared	0.16		0.17	

Note. Unstandardized regression coefficients. Standard errors in parentheses.
*p < .05. **p < .01.

DISCUSSION

In response to the first question, 52% responded that they not at all, or to a small degree, would be concerned about their safety outdoors if wolves lived in their home municipality, while 31% answered "to a large" or "to a very large degree". And in response to the second question ("I would become more careful when being outdoors…"), 36% agreed completely. This response pattern is similar to what was found in the Swedish survey (Karlsson et al. 1999), where 30% of the respondents answered "always" or "often" to the first question, while 47% answered "never". In the Finnish survey (Lumiaro 1998), 32% of the respondents agreed that they were afraid of the wolf. In addition, the gender difference is similar in the Swedish sample and the sample from Eastern Norway. However, when intra-national geographical groups are compared, differences appear. In the Swedish sample, people who lived in counties where wolves exist did not more often express concern about the presence of wolves than those who lived in urban areas. In contrast, the proportion of Norwegians who lived in rural areas and expressed such concern was 15% higher than for respondents who lived in cities (40% vs. 25%). Lumiaro (1998) also reported a higher degree of fear among rural than among urban residents in Finland. Consequently, it seems that in a representative sample, including both urban and rural areas, the level of concern expressed toward wolves when being outdoors is similar in Norway and Sweden, but that the urban vs. rural differences found in Finland and Norway is non-existent or negligible in Sweden.

However, the average values reported from a relatively large geographical area are not incompatible with considerable local variation. It is likely that while on an average 40% of rural inhabitants in Eastern Norway express fear of wolves when being outdoors, one also finds places where fear of wolves are higher or lower. For example, in municipalities overlapping with the territory of a wolf pack, the degree of fear when being outdoors has been reported to be between 50% and 60% (Hagerud et al. 2000, Aurskog-Høland Municipality 1999). Similar variations most probably also exist in Swedish "wolf areas". Similarly, our results have shown that the degree of concern is relatively high within specific age and gender groups. For example, 74% of all women, and 80% of the older respondents (65 yrs. and above) agreed completely or partly to the statement "I would become more careful when being outdoors in the fields and forests".

Generally, however, with respect to socio-demographic variables (age, gender, education) the Swedish and the present results confirm those reported previously, both in Norway and in the USA (Bjerke et al. 1998a, Kellert 1991, Kellert & Berry 1987): A negative perception of wolves is more frequent among the elderly than among younger age groups, less frequent among those with higher education compared with those with lower education, and more frequent among females than among males.

Population surveys do not give information about how fear-relevant attitudes toward an animal species emerge and develop. But if one should attempt to explain these differential emotional self-reported reactions of various groups to wolves, genetic as well as historical and socio-political factors are of relevance. First, evolution of the human species may have favoured selection of genes that predispose individuals to learn fear of some animals relatively quickly, while associating fear with other species are made more difficult (Darwin 1872, Öhman 1986). Several studies have shown that females more often express phobic fears than males do (King et al. 2000). This finding could reflect an adaptation to an evolutionary role of females as primary caretakers of young children, who needed protection against predators. However, when using a self-report measure of fear, the observed gender difference in fear of wolves may be artefactual, because it is socially more permissible for women to admit their fear, while males often are socialised to deny their fears. Obviously, identifying genetic and cultural determinants of gender differences in fear is extremely complicated. But twin studies indicate an important genetic contribution to the expression of fear, amounting to a heritability estimate of 48% for snake fear (Rose et al. 1981).

However, even though fears and concerns are influenced by evolutionary and genetic factors, they obviously also are influenced by experiential and cultural factors. More frequent fear among older respondents may be due to historical factors. For centuries, large carnivores were persecuted in Norway, and the negative attitude toward this group of animals was widespread until recently. Respondents above the age of 50 years most likely have been influenced by this anti-carnivore tradition, through learning processes like modelling (observing reactions of others) and instruction/information (exposure to frightening reports). This argument is strengthened by the findings that fear of other animal species (e.g. snakes) often declines with increasing age (e.g., Agras et al. 1969, Costello 1982). The effect of education on fear-related attitudes toward wolves may be more difficult to explain. Respondents with higher education may have been influenced by the emphasis placed upon the importance of biodiversity and the protection of endangered species, often to be found in the curricula of various disciplines. It is also well known that wolves have not been responsible for attacks on humans in Norway during this or the previous century, and knowledge about this, gained through studies, could possibly reduce irrational fear of the species.

The relatively high level of self-reported fear-relevant attitudes toward wolves found in rural areas may possibly best be explained by combining the historical anti-carnivore traditions mentioned above, and the political campaigns run by groups whose material interests reside in reducing or exterminating the wolf population. Such groups strongly reinforce conformity among members and their associates, often produce more extreme decisions than the average of individual members, and

foster stereotypes and antipathies toward out-groups (Brown 2000). Similar group processes may contribute to a lower strength of self-reported fear-relevant attitudes among members of groups motivated by an interest in conservation.

For example, negative attitudes toward large carnivores may be one part of a political protest against control of land use by central authorities. In a previous study in Norway it was shown that sheep farmers expressed an external locus of control (a belief that external forces control events), relative to wildlife managers and research biologists. And a positive association was found between an external locus of control and negative attitudes toward large carnivores (Bjerke et al. 2000).

The findings that the effects of education (question 2), and of having small children at home (question 1 and 3) were significant only among urban respondents may seem puzzling. That education and having small children did not influence concern about own and family outdoor safety among rural inhabitants may reflect that people in rural areas in general are more experienced and knowledgeable concerning wildlife, making care for children and education less penetrable variables. The same line of reasoning may apply to the finding that dog owners in rural areas are less afraid of wolves than those without a dog in the household. Rural dog owners know much about the behaviour of canids, and they have almost daily experiences in adapting to events in nature, thus they may feel competent to cope with potential encounters with wolves. In addition, the close genetic and physiognomic relationship between their pet dog and wolves could counteract their fear of wild wolves. The finding may be a surprise to some groups of people, however, since dogs killed by wolves has become a problem in some areas, causing suffering among dog owners. Our results suggest that when rural dog owners sometimes are negative to wolves in their home area, they may be motivated by a concern for their dog, rather than by wolf fear.

The disagreement about the presence of large carnivores has to a large extent been interpreted as an expression of the existence of conflicting utilitarian interests, with livestock producers and conservationists in opposite positions. The present study shows, however, that conflicting affective attitudes toward wolves exist also in the general public, and that socio-demographic variables like age, gender, education, and degree of urbanism are important correlates of these attitudes. Even if the utilitarian and economic livestock vs. large carnivore conflicts were resolved, the marked degree of fear and concern expressed in the general public would still represent a challenge to wildlife management.

However, a word of caution regarding the validity of self-report measures is needed in conclusion: The correlation between verbally expressed fear of wolves and behavioural expressions of this fear is unknown. But it has been shown previously that the correlations between self-reported fear of dogs or snakes, and the willingness to behaviourally approach these animals, may be relatively low (Geer 1965, Lanyon & Manesovitz 1966). Persons may fear an object but nevertheless be able and willing to adapt to the presence of this object, if effective coping strategies are available. Self-report measures of fears, worries, and concerns do not give information about two additional important aspects of these emotions, e.g., 1) fear-related behaviour (avoidance, hypervigilance), and 2) physiological reactions (autonomous activation). In other words, self-report measures give little information about the strength and congruence of concern and fear. Neither do such methods give information about the degree to which cognitive factors (appraisal, opinions, meanings) influence the answers. Nevertheless, widespread verbally expressed attitudes toward large carnivores carry important political and social significance thus information about their prevalence and strength is important for future management of these species.

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SAMMENDRAG

Sosiodemografiske variabler og frykt-relaterte holdninger til ulv (*Canis lupus lupus*). en holdningsundersøklse i sørøst-Norge

På bakgrunn av den relativt intense debatten om ulv som har foregått på Østlandet ble det besluttet å utføre en undersøkelse om hva folk i Hedmark, Østfold, Akershus og Oslo mener om at ulv etablerer seg innenfor disse fylkene. I denne undersøkelsen gjengis resultater fra en analyse av tre spørsmål om frykt og uro for ulv. I alt 1200 personer fra fylkene Hedmark (162), Østfold (210), Oslo (383) og Akershus (445) var informanter.

52% svarte at de ikke i det hele tatt, eller i liten grad, ville være urolige for sin egen eller for familiens sikkerhet utendørs dersom det var ulv i kommunen de bor i. 31% sa de ville komme til å være urolige i stor eller svært stor grad, mens 16% uttrykte middels grad av uro. 36% av utvalget uttrykte at de helt sikkert ville komme til å bli mer forsiktige med å ferdes i skog og mark dersom det var ulv i kommunen eller i nabokommunen. 25% sa de var delvis enige i at de ville komme til å bli mer forsiktige, mens 38% sa at de ikke ville komme til å bli mer forsiktige. På et tredje spørsmål kunne folk uttrykke grad av frykt for noen arter som ble listet opp. 25% sa at de var svært redd ulv, 30% var litt redd, mens 43% svarte ”ikke redd”.

Sammenligningene mellom ulike grupper av svarere viser tre klare tendenser:

a) Frykt, uro og forsiktighet forekommer oftere blant eldre enn blant yngre.
s) Det er en klar kjønnsforskjell i materialet: Kvinner uttrykker oftere frykt.
c) Folk bosatt i by uttrykker mindre ofte frykt og uro for ulv, sammenlignet med folk bosatt i spredtbygde strøk.

Det er i tillegg to tendenser som er noe mindre markerte, men likevel relativt klare: Selv-rapportert uro, forsiktighet og frykt uttrykkes oftest blant folk med kort utdanning, og fryktnivået er høyest i Østfold. En noe svakere tendens er at folk som har små barn noe oftere er mer urolige og redde for ulv, sammenlignet med like gamle foreldre uten små barn. Men dette gjelder bare for folk bosatt i by. De som har hund uttrykte ikke så ofte frykt for ulv sammenlignet med de uten hund, men dette gjaldt bare de som er bosatt i spredtbygde strøk eller tettsteder.

Det er både likheter og forskjeller med holdningene som er funnet i Sverige. Ett fellestrekk ved det svenske og det østlandske utvalget er at gjennomsnittlig uro i totalutvalgene er omtrent på samme nivå. Vi finner de samme forskjellene i de to landene mellom grupper inndelt etter kjønn, alder og utdanning. De eldre i Sverige er for eksempel omtrent like urolige for ulven som de eldre på Østlandet er. Dette tyder på at et vesentlig element i de negative holdningene til ulv utgjøres av folk som viderebærer motstanden mot rovdyr som var enda mer utbredt inntil for 10-20 år siden.

Det er store forskjeller i frykt mellom svensker og østlendinger bosatt i spredtbygde strøk. Mens uttrykt uro på den svenske landsbygda ikke synes å være særlig forskjellig fra hva man fant i mer tett befolkede områder i Sverige, er uttrykt uro på landsbygda på Østlandet klart hyppigere enn i bystrøk på Østlandet. Et lignende mønster finnes i Finland når det spørres om man er redd ulv.

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