

Learning to Live with Ticks? The Role of Exposure and Risk Perceptions in Protective Behaviour Against Tick-Borne Diseases

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Learning to Live with Ticks? The Role of Exposure and Risk Perceptions in Protective Behaviour Against Tick-Borne Diseases

Kan vi lära oss att leva med fästingar? En studie av riskuppfattning och beteende kopplat till fästingburna sjukdomar

Overview

Identification SND1049-001

Abstract

The purpose of this study is to analyse the role of risk perceptions and exposure for protective behaviour against tick bites and the related diseases Lyme borreliosis (LB) and tick-borne encephalitis (TBE), both of which are growing health concerns. We use data from a national survey in Sweden with respondents in geographical areas with substantial differences in both abundance of ticks and incidence of LB and TBE. We find that the share of respondents who frequently use protective clothing (64%), perform tick checks (63%) or avoid tall grass while in areas with ticks (48%) is relatively high. However, the use of protective measures is uneven and a considerably lower share tuck their trousers into their socks (18%), use repellent against ticks (16%) or use a combination of protective measures. Thirtyone per cent of the respondents report one or more tick bites in the last year and 68% report one or more lifetime tick bites, indicating that it is difficult to protect oneself from tick bites. There is a strong positive association between exposure and checking the skin for ticks, but exposure is only weakly associated with other protective measures. Tick bites are perceived as a serious health risk by as many as 43% of the respondents. The perception that a single tick bite is serious is negatively associated with actual exposure to ticks, while the opposite is true for the perception that tick bites constitute a serious lifetime health risk. This indicates a learning effect in relation to risk perceptions and the performance of tick checks, but not in relation to other protective measures. Recommendations include informing people of the risks associated with tick bites, the efficacy of various protective measures and the importance of combining multiple types of protection. Given the high exposure to tick bites, the growing incidence of TBE and LB, and the difficulties in preventing tick bites, other preventive measures should be further discussed, including vaccination programmes.

Unit of Analysis Individual

Scope & Coverage

Keywords Ticks, Tick-Borne Diseases, TBE, Borrelia Infections, Dangerous Behavior, Encephalitis,

Tick-Borne, Risk Assessment

Topics ECONOMICS, HEALTH, NATURAL ENVIRONMENT, Medical and Health Sciences,

Social Sciences

Time Period(s) 2013
Countries Sweden

Producers & Sponsors

Primary Slunge, Daniel University of Gothenburg, Department of Economics, School of Business,

Investigator(s) Economics and Law

Sampling

Sampling Procedure

The questionnaire was distributed online in October 2013 to 6 000 respondents aged 18–85 years in a national internet panel representative of the Swedish population. The internet panel consists of approximately 8 000 members recruited through telephone interviews with randomly sampled respondents. After two reminders, responses from 2

Overview

066 participants were received, corresponding to a response rate of 34%. This paper uses only the 1 510 respondents (25%) who answered all questions corresponding to the variables included in this analysis. Other

T	A 1	
Data -	Cal	lection

Data Collectionstart 2013-10-01Datesend 2013-11-30

Time Period(s)

Data Collection Self-administered questionnaire

Mode

Data Collector(s) Enkätfabriken

File Description(s)

Dataset contains 1 file(s)

Learningtolive with ticks april 18 2018

Cases 1510 Variable(s) 70

Variables List

Dataset contains 70 variable(s)

File Learningtolivewithticks april 18 2018

	Name	Label		Question
1	SND_study	SND-studie 1049	-	
2	SND_dataset	SND-dataset 1049-001	-	
3	SND_version	SND version 1.0	-	
4	<u>female</u>	Female respondent	-	
5	<u>age</u>	Age	-	
6	age1830	Aged between 19 and 30, inclusive	-	
7	age3145	Aged between 31 and 45, inclusive	-	
8	age4665	Aged between 46 and 65, inclusive	-	
9	age66plus	Aged more than 65	-	
10	income	Household pre-tax income/month (SEK)	-	
11	education	Level of highest completed education	-	
12	<u>university</u>	Has studied at university	-	
13	<u>children</u>	Has child below 18 years	-	
14	<u>rural</u>	Lives in the countryside/small village	-	
15	outtickarea	Monthly of more frequent visists to areas with ticks	-	
16	<u>outTBEarea</u>	Monthly or more frequent visists to TBE risk area	-	
17	notriskarea	Lives in Emerging Risk Area	-	
18	tickriskonly	Live in Tick Risk Area	-	
19	tberiskarea	Live in TBE Risk Area	-	
20	<u>cat</u>	Cat owner	-	
21	dog	Dog owner	-	
22	<u>farmanimal</u>	Other outdoor animal	-	
23	summerhouseri	Spends time in a summer house in area with TBE	-	
24	worktickrisk	Work involves risk of tick bites	-	
25	outforestdail	Visits areas with ticks daily	-	
26	outforestweek	Visits areas with tick weekly	-	
27	outforestmont	Visits areas with ticks monthly	-	
28	outTBEdaily	Visits areas with risk of TBE daily	-	
29	outTBEweekly	Visits areas with risk of TBE weekly	-	
30	outTBEmonthly	Visits areas with risk of TBE monthly	-	
31	notickbites	Has never had a tick bite	-	
32	onetickbite	Has had 1 tick bite in lifetime	-	
33	sometickbites	Has had 2-10 tick bite in lifetime	-	
34	tickbites10pl	Has had more than 10 tick bites in lifetime	-	
35	tickbiteever	Has had 1 or more tickbites in lifetime	-	

	Name	Label		Question
36	tbite12m	Had at least 1 tick bite in last 12 months	-	
37	tickbornedise	Respondent has had a tick borne disease	-	
38	<u>tbe</u>	Respondent has been diagnosed with TBE	-	
39	<u>borrelia</u>	Respondent has been diagnosed with borrelia	-	
40	othertickborn	Other tick-borne disease	-	
41	friendtickbor	Someone in family or friends has had a tick borne disease	-	
42	knowledge	Nr of correct answers on knowledge questions	-	
43	know1	Knowledge: Small risk of getting ill from tick bite	-	
44	know2	Knowledge: Borrelia not contagious from person to person	-	
45	know3	Knowledge: Mosquito repellant also repells ticks	-	
46	know4	Knowledge: There is a vaccine against TBE	-	
47	know5	Knowledge: TBE cannot be treated with antibiotics	-	
48	know6	Knowledge: Borrelia can be treated with antibiotics	-	
49	know7	Knowledge: Borrelia is more common than TBE in Sweden	-	
50	risktickbites	Perception: tick bites rather or very high risk to health	-	
51	tickbiteserio	Perception: rather or very serious to get tick bite	-	
52	protcheckbody	Perception: Checking body for ticks is very effective protection	-	
53	protclothesVE	Perception: Protective clothing is very effective protection	-	
54	protavoidVERY	Perception: Avoiding high grass and bushes is very effective protection	-	
55	protsocksVERY	Perception: Tucking trousers into socks is very effective protection	-	
56	protrepellent	Perception: Using repellent is very effective protection	-	
57	tbevaccinated	Vaccinated against TBE	-	
58	protb1	q_36_1; longsleves and trousers	-	
59	protb2	q_36_2;repellent	-	
60	protb3	q_36_3;socksonpant	-	
61	protb4	q_36_4;avoidhighgrass	-	
62	protb5	q_36_5;checkbody	-	
63	protclothes	Covering clothing	-	
64	protcheckbody	Check body for ticks	-	
65	<u>protsocks</u>	Tuck trousers into socks	-	

	Name	Label		Question
66	protrepellent	Repellent	-	
67	protavoid	Avoid high grass and bushes while in areas with ticks	-	
68	protcount	Number of protective behaviours used ofte or always (0-5)	-	
69	protcount15	Number of protective measures and their intensity in use (0-15)	-	
70	protect5	Combinations of protective measures	-	

Variables Description

Dataset contains 70 variable(s)

File: Learningtolive with ticks april 18 2018

SND_study: SND-studie 1049

 Value
 Label
 Cases
 Percentage

 1049
 SND1049
 1510
 100.0%

Information: Type: discrete, Format: numeric, Range: 1049-1049, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -)

SND dataset: SND-dataset 1049-001

 Value
 Label
 Cases
 Percentage

 1
 SND1049-001
 1510
 100.0%

Information: Type: discrete, Format: numeric, Range: 1-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -)

SND_version: SND version 1.0

Value	Label	Cases Percentage	
1	SND 1.0	1510	100.0%

Information: Type: discrete, Format: numeric, Range: 1-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -)

female: Female respondent

Value	Label	Cases	Percentage	
0		697		46.2%
1		813		53.8%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.538 / -) StdDev: (0.499 / -)

age: Age

Information: Type: continuous, Format: numeric, Range: 18-80, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (50.892 / -) StdDev: (17.006 / -)

age1830: Aged between 19 and 30, inclusive

Value	Label	Cases Percentage	
0		1285	85.1%

age1830: Aged between 19 and 30, inclusive

ValueLabelCasesPercentage122514.9%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.149 / -) StdDev: (0.356 / -)

age3145: Aged between 31 and 45, inclusive

Value	Label	Cases Percentage	
0		1122 74.3	3%
1		388 25.7%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.257 / -) StdDev: (0.437 / -)

age4665: Aged between 46 and 65, inclusive

Value	Label	Cases	Percentage
0		1048	69.4%
1		462	30.6%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.306 / -) StdDev: (0.461 / -)

age66plus: Aged more than 65

Value	Label	Cases	Percentage	
0		1075		71.2%
1		435	28.8%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.288 / -) StdDev: (0.453 / -)

income: Household pre-tax income/month (SEK)

Information: Type: continuous, Format: numeric, Range: 5-115, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (43.987 / -) StdDev: (23.001 / -)

education: Level of highest completed education

Value	Label	Cases Percentage
1		3 0.2%
2		112 7.5%
3		203 13.5%

education: Level of highest completed education

Value	Label	Cases 1	Percentage
4		398	26.5%
5		353	23.5%
6		409	27.2%
7		24	1.6%
Sysmiss		8	

Information: Type: discrete, Format: numeric, Range: 1-7, Missing: *

Statistics (NW/W): Valid: (1502 / -) Invalid: (8 / -) Mean: (4.537 / -) StdDev: (1.277 / -)

university: Has studied at university

Value	Label	Cases Percentage	
0		716	47.7%
1		786	52.3%
Sysmiss		8	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1502 / -) Invalid: (8 / -) Mean: (0.523 / -) StdDev: (0.5 / -)

children: Has child below 18 years

Value	Label	Cases Percentage	
0		1114 73.	3.8%
1		396 26.2%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.262 / -) StdDev: (0.44 / -)

rural: Lives in the countryside/small village

Value	Label	Cases	Percentage
0		1051	69.6%
1		459	30.4%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.304 / -) StdDev: (0.46 / -)

outtickarea: Monthly of more frequent visists to areas with ticks

Value	Label	Cases Percentage	
0		255 16.9%	
1		1255 83.1	%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

outtickarea: Monthly of more frequent visists to areas with ticks

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.831 / -) StdDev: (0.375 / -)

outTBEarea: Monthly or more frequent visists to TBE risk area

Value	Label	Cases	Percentage		
0		950			62.9%
1		560		37.1%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.371 / -) StdDev: (0.483 / -)

notriskarea: Lives in Emerging Risk Area

Value	Label	Cases Percentage	
0		1323	87.6%
1		187 12.4%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.124 / -) StdDev: (0.33 / -)

tickriskonly: Live in Tick Risk Area

Value	Label	Cases	Percentage		
0		626		41.5%	
1		884			58.5%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.585 / -) StdDev: (0.493 / -)

tberiskarea: Live in TBE Risk Area

Value	Label	Cases	Percentage
0		1071	70.9%
1		439	29.1%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.291 / -) StdDev: (0.454 / -)

cat: Cat owner

Value	Label	Cases Percentage	
0		1263	83.6%
1		247 16.4%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

cat: Cat owner

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.164 / -) StdDev: (0.37 / -)

dog: Dog owner

Value	Label	Cases Percentage
0		1246 82.5%
1		264 17.5%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.175 / -) StdDev: (0.38 / -)

farmanimal: Other outdoor animal

Value	Label	Cases Percentage	
0		1453	96.2%
1		57 3.8%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.0377 / -) StdDev: (0.191 / -)

summerhouserisk: Spends time in a summer house in area with TBE

Value	Label	Cases	Percentage
0		1237	83.1%
1		252	16.9%
Sysmiss		21	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1489 / -) Invalid: (21 / -) Mean: (0.169 / -) StdDev: (0.375 / -)

worktickrisk: Work involves risk of tick bites

Value	Label	Cases	Percentage
0		1352	90.1%
1		149	9.9%
Sysmiss		9	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1501 / -) Invalid: (9 / -) Mean: (0.0993 / -) StdDev: (0.299 / -)

outforestdaily: Visits areas with ticks daily

Value	Label	Cases Percentage	
0		1099	73.4%

outforestdaily: Visits areas with ticks daily

Value	Label	Cases Percentage
1		399 26.6%
Sysmiss		12

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1498 / -) Invalid: (12 / -) Mean: (0.266 / -) StdDev: (0.442 / -)

outforestweekly: Visits areas with tick weekly

Value	Label	Cases	Percentage
0		949	63.4%
1		549	36.6%
Sysmiss		12	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1498 / -) Invalid: (12 / -) Mean: (0.366 / -) StdDev: (0.482 / -)

outforestmonthly: Visits areas with ticks monthly

Value	Label	Cases	Percentage
0		1191	79.5%
1		307	20.5%
Sysmiss		12	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1498 / -) Invalid: (12 / -) Mean: (0.205 / -) StdDev: (0.404 / -)

outTBEdaily: Visits areas with risk of TBE daily

Value	Label	Cases Percentage	
0		1330	88.1%
1		180 11.9%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.119 / -) StdDev: (0.324 / -)

outTBEweekly: Visits areas with risk of TBE weekly

Value	Label	Cases	Percentage	
0		1302		86.2%
1		208	13.8%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.138 / -) StdDev: (0.345 / -)

outTBEweekly: Visits areas with risk of TBE weekly

outTBEmonthly: Visits areas with risk of TBE monthly

Value	Label	Cases Percentage	
0		1338	88.6%
1		172 11.4%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.114 / -) StdDev: (0.318 / -)

notickbites: Has never had a tick bite

Value	Label	Cases	Percentage		
0		1027			68.0%
1		483		32.0%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.32 / -) StdDev: (0.467 / -)

onetickbite: Has had 1 tick bite in lifetime

V	alue Label	Cases	Percentage	
0		1327		87.9%
1		183	12.1%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.121 / -) StdDev: (0.326 / -)

sometickbites: Has had 2-10 tick bite in lifetime

Value	Label	Cases	Percentage	
0		924		61.2%
1		586	38.8%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.388 / -) StdDev: (0.487 / -)

tickbites10plus: Has had more than 10 tick bites in lifetime

Value	Label	Cases	Percentage	
0		1252		82.9%
1		258	17.1%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.171 / -) StdDev: (0.377 / -)

tickbites10plus: Has had more than 10 tick bites in lifetime

tickbiteever: Has had 1 or more tickbites in lifetime

Value	Label	Cases Percenta	ge
0		483	32.0%
1		1027	68.0%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.68 / -) StdDev: (0.467 / -)

tbite12m: Had at least 1 tick bite in last 12 months

Value	Label	Cases	Percentage		
0		1040			68.9%
1		470		31.1%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.311 / -) StdDev: (0.463 / -)

tickbornedisease: Respondent has had a tick borne disease

Value	Label	Cases Percentage
0		1331 88.1%
1		179 11.9%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.119 / -) StdDev: (0.323 / -)

tbe: Respondent has been diagnosed with TBE

Value	Label	Cases	Percentage	
0		1503		99.5%
1		7	0.5%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.00464 / -) StdDev: (0.068 / -)

borrelia: Respondent has been diagnosed with borrelia

Value	Label	Cases	Percentage	
0		1340		88.7%
1		170	11.3%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.113 / -) StdDev: (0.316 / -)

borrelia: Respondent has been diagnosed with borrelia

othertickbornedisease: Other tick-borne disease

Value	Label	Cases	Percentage	
0		1507		99.8%
1		3	0.2%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.00199 / -) StdDev: (0.0445 / -)

friendtickbornedisease: Someone in family or friends has had a tick borne disease

Value	Label	Cases	Percentage
0		895	59.4%
1		612	40.6%
Sysmiss		3	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1507 / -) Invalid: (3 / -) Mean: (0.406 / -) StdDev: (0.491 / -)

knowledge: Nr of correct answers on knowledge questions

Value	Label	Cases Perce	ntage		
0		62	4.1%		
1		125	8.3%		
2		181		12.0%	
3		228		15.1%	
4		321			21.3%
5		309			20.5%
6		218		14.4%	
7		66	4.4%		

Information: Type: discrete, Format: numeric, Range: 0-7, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (3.821 / -) StdDev: (1.783 / -)

know1: Knowledge: Small risk of getting ill from tick bite

Value	Label	Cases Percentage	Cases Percentage	
0		614 40.7%	614	
1		896 59.3%	896	59.3%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.593 / -) StdDev: (0.491 / -)

know2: Knowledge: Borrelia not contagious from person to person

Value	Label	Cases Percentage
0		270 17.9%
1		1240 82.1%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.821 / -) StdDev: (0.383 / -)

know3: Knowledge: Mosquito repellant also repells ticks

Value	Label	Cases Percentage	2	
0		1237		81.9%
1		273	18.1%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.181 / -) StdDev: (0.385 / -)

know4: Knowledge: There is a vaccine against TBE

Value	Label	Cases	Percentage		
0		584		38.7%	
1		926			61.3%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.613 / -) StdDev: (0.487 / -)

know5: Knowledge: TBE cannot be treated with antibiotics

Value	Label	Cases	Percentage		
0		1024			67.8%
1		486		32.2%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.322 / -) StdDev: (0.467 / -)

know6: Knowledge: Borrelia can be treated with antibiotics

Value	Label	Cases	Percentage		
0		505		33.4%	
1		1005			66.6%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.666 / -) StdDev: (0.472 / -)

know7: Knowledge: Borrelia is more common than TBE in Sweden

Value	Label	Cases Percentage	
0		566	37.5%
1		944	62.5%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.625 / -) StdDev: (0.484 / -)

risktickbites: Perception: tick bites rather or very high risk to health

Value	Label	Cases Percentage	
0		864	57.2%
1		646	42.8%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.428 / -) StdDev: (0.495 / -)

Variables Description

Dataset contains 70 variable(s)

tickbiteserious: Perception: rather or very serious to get tick bite

Value	Label	Cases	Percentage
0		878	58.1%
1		632	41.9%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.419 / -) StdDev: (0.493 / -)

protcheckbodyVERYeffective: Perception: Checking body for ticks is very effective protection

Value	Label	Cases	Percentage		
0		455		30.2%	
1		1054			69.8%
Sysmiss		1			
Information:	Type:	discrete, Format: numeric, Range: 0-1, Missing: *			

Statistics (NW/W): Valid: (1509 / -) Invalid: (1 / -) Mean: (0.698 / -) StdDev: (0.459 / -)

protclothes VERY effective: Perception: Protective clothing is very effective protection

Value	Label	Cases Po	Percentage	
0		845		56.0%
1		665	44.0%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.44 / -) StdDev: (0.497 / -)

protavoidVERYeffective: Perception: Avoiding high grass and bushes is very effective protection

Value	Label	Cases	Percentage	
0		797	53.0%	
1		706	47.0%	
Sysmiss		7		

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1503 / -) Invalid: (7 / -) Mean: (0.47 / -) StdDev: (0.499 / -)

protsocksVERYeffective: Perception: Tucking trousers into socks is very effective protection

Value	Label	Cases Percentage
0		1039 69.1%

protsocksVERYeffective: Perception: Tucking trousers into socks is very effective protection

Value	Label	Cases	Percentage
1		464	30.9%
Sysmiss		7	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1503 / -) Invalid: (7 / -) Mean: (0.309 / -) StdDev: (0.462 / -)

protrepellent VERY effective: Perception: Using repellent is very effective protection

Value	Label	Cases	Percentage
0		1379	91.7%
1		124	8.3%
Sysmiss		7	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1503 / -) Invalid: (7 / -) Mean: (0.0825 / -) StdDev: (0.275 / -)

tbevaccinated: Vaccinated against TBE

Value	Label	Cases	Percentage
0		1113	75.5%
1		361	24.5%
Sysmiss		36	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1474 / -) Invalid: (36 / -) Mean: (0.245 / -) StdDev: (0.43 / -)

protb1: q_36_1; longsleves and trousers

Value	Label	Cases Percentage
1		130 8.6%
2		407 27.0%
3		720 47.7%
4		253 16.8%

Information: Type: discrete, Format: numeric, Range: 1-4, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (2.726 / -) StdDev: (0.841 / -)

protb2: q_36_2;repellent

Value	Label	Cases Percentag	e	
1		648		42.9%
2		616		40.8%
3		190	12.6%	
4		56 3.7%		

protb2: q_36_2;repellent

Information: Type: discrete, Format: numeric, Range: 1-4, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (1.771 / -) StdDev: (0.807 / -)

protb3: q_36_3;socksonpant

Value	Label	Cases	Percentage		
1		728			48.2%
2		511		33.8%	
3		190	12.6%		
4		81	5.4%		

Information: Type: discrete, Format: numeric, Range: 1-4, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (1.751 / -) StdDev: (0.872 / -)

protb4: q_36_4;avoidhighgrass

Value	Label	Cases Percentage
1		242 16.0%
2		542 35.9%
3		602 39.9%
4		124 8.2%

Information: Type: discrete, Format: numeric, Range: 1-4, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (2.403 / -) StdDev: (0.852 / -)

protb5: q_36_5;checkbody

Value	Label	Cases Percentage	
1		145 9.6%	
2		413 27.4%	
3		541 35.89	%
4		411 27.2%	

Information: Type: discrete, Format: numeric, Range: 1-4, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (2.807 / -) StdDev: (0.945 / -)

protclothes: Covering clothing

Value	Label	Cases	Percentage		
0		537		35.6%	
1		973			64.4%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.644 / -) StdDev: (0.479 / -)

protcheckbody: Check body for ticks

Value	Label	Cases	Percentage		
0		558		37.0%	
1		952			63.0%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.63 / -) StdDev: (0.483 / -)

protsocks: Tuck trousers into socks

Value	Label	Cases Percentage	
0		1239 82.1%	6
1		271 17.9%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.179 / -) StdDev: (0.384 / -)

protrepellent: Repellent

Value	Label	Cases Percentage
0		1264 83.7%
1		246 16.3%

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.163 / -) StdDev: (0.369 / -)

protavoid: Avoid high grass and bushes while in areas with ticks

Value	Label	Cases	Percentage	
0		784	51.9%	
1		726	48.1%	

Information: Type: discrete, Format: numeric, Range: 0-1, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (0.481 / -) StdDev: (0.5 / -)

protcount: Number of protective behaviours used ofte or always (0-5)

Value	Label	Cases Percen	tage	
0		201	13.3%	
1		310		20.5%
2		420		27.8%
3		353		23.4%
4		171	11.3%	
5		55 3	3.6%	

Information: Type: discrete, Format: numeric, Range: 0-5, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (2.098 / -) StdDev: (1.321 / -)

protocunt: Number of protective behaviours used ofte or always (0-5)

protcount15: Number of protective measures and their intensity in use (0-15)

Value	Label	Cases	Percentage		
0		40	2.6%		
1		22	1.5%		
2		65	4.3%		
3		99		5.6%	
4		123		8.1%	
5		205			13.6%
6		217			14.4%
7		205			13.6%
8		205			13.6%
9		127		8.4%	
10		85	5.6	%	
11		52	3.4%		
12		29	1.9%		
13		18	1.2%		
14		10	0.7%		
15		8	0.5%		

Information: Type: discrete, Format: numeric, Range: 0-15, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -) Mean: (6.457 / -) StdDev: (2.86 / -)

protect5: Combinations of protective measures

Value	Label	Cases	Percentage		
0	Noprotection	201			13.3%
1	Protclothesonly	118		7.8%	
2	Checkbodyonly	129		8.5%	
3	Clothes&Body	168		11.1%	ó
4	Clothes&Avoid	104	6.9	9%	
5	Body&Avoid	100	6.6	5%	
6	Clothes&Body&Avoid	214			14.2%
7	Clothes&Body&Avoid&Other	202			13.4%
8	Clothes&Body&Socks&Other	103	6.8	8%	
9	Other	171		11.39	%

Information: Type: discrete, Format: numeric, Range: 0-9, Missing: *

Statistics (NW/W): Valid: (1510 / -) Invalid: (0 / -)