

Supplementary information.**Supplementary table 1.** Sample characteristics of the obese individuals (n = 1274).

		Men			Women		
		Sami (n=274)	Non-Sami (n=334)	Total (n=608)	Sami (n=310)	Non-Sami (n=356)	Total (n=666)
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Age (years)	40-49	75 (27.4)	82 (24.6)	157 (25.8)	88 (28.4)	113 (31.7)	201 (30.2)
	50-59	82 (29.9)	111 (33.2)	193 (31.7)	104 (33.5)	108 (30.3)	212 (31.8)
	60-69	117 (42.7)	141 (42.2)	258 (42.4)	118 (38.1)	135 (37.9)	253 (38.0)
	p-value†			p=0.609			p=0.561
Anxiety/depression	< 2.0	231 (84.3)	307 (91.9)	538 (88.5)	260 (83.9)	308 (86.5)	568 (85.3)
	≥ 2.0	43 (15.7)	27 (8.1)	70 (11.5)	50 (16.1)	48 (13.5)	98 (14.7)
Weight perception	p-value†*			p=0.003			p=0.336
	Accurate	190 (69.3)	262 (78.4)	452 (74.3)	260 (83.9)	331 (93.0)	591 (88.7)
	Underestimate	84 (30.7)	72 (21.6)	156 (25.7)	50 (16.1)	25 (7.0)	75 (11.3)
Education (years)	p-value†*			p=0.011			p<0.001
	< 13	186 (71.3)	191 (58.4)	377 (64.1)	146 (48.5)	196 (56.2)	342 (52.6)
	≥ 13	75 (28.7)	136 (41.6)	211 (35.9)	155 (51.5)	153 (43.8)	308 (47.4)
	Missing	13	7	20	9	7	16
Marital status	p-value†*			p=0.001			p=0.051
	Married/cohabit	187 (68.2)	247 (74.0)	434 (71.4)	207 (66.8)	276 (77.5)	483 (72.5)
	Single	83 (30.3)	84 (25.1)	167 (27.5)	100 (32.3)	77 (21.6)	177 (26.6)
	p-value§			p=0.144			p=0.002
BMI (mean, SD)		33.3 (±3.1)	33.3 (±3.2)	33.3 (±3.1)	34.0 (±3.6)	33.9 (±3.6)	34.0 (±3.6)
Waist circumference (mean, SD)		110.1 (±8.3)	111.7 (±9.5)	111.0 (±9.1)	105.8 (±9.0)	105.5 (±8.6)	105.6 (±8.8)

§ Ethnic difference tested by Pearson's Chi-square test and p-values are presented.

Supplementary table 2. Sex-stratified association analyses between body weight underestimation and anxiety and depression (SCL-5) in the individuals with overweight or obesity (n=3266*) considering selected demographic variables. Presented as Odds Ratios (ORs) with 95 % confidence intervals (CI) separately for Sami and non-Sami.

Men (n=1645*)	Sami								Non-Sami							
	Model 1		Model 2		Model 3		Model 4		Model 1		Model 2		Model 3		Model 4	
	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P	OR (95% CI)	P
Accurate/Under-estimation (Acc. Ref)	0.50 (0.31-0.81)	0.005	0.54 (0.32-0.91)	0.021	0.48 (0.28-0.82)	0.008	0.48 (0.27-0.84)	0.010	0.85 (0.53-1.36)	0.490	0.73 (0.43-1.26)	0.262	0.76 (0.44-1.32)	0.336	0.71 (0.41-1.24)	0.231
Age (continuous)	0.97 (0.94-1.00)	0.034	0.97 (0.94-1.00)	0.033	0.96 (0.93-0.99)	0.005	0.96 (0.93-0.99)	0.006	0.98 (0.96-1.01)	0.196	0.98 (0.96-1.01)	0.211	0.98 (0.95-1.01)	0.187	0.98 (0.96-1.01)	0.258
BMI (continuous)			1.03 (0.96-1.10)	0.441	1.00 (0.94-1.08)	0.891	0.99 (0.92-1.07)	0.838			0.96 (0.89-1.04)	0.308	0.97 (0.90-1.05)	0.451	0.96 (0.89-1.04)	0.331
Low/High education (Low Ref)					0.26 (0.14-0.49)	<0.001	0.29 (0.15-0.54)	<0.001					0.87 (0.53-1.43)	0.578	0.92 (0.56-1.51)	0.731
Single/Married (Single Ref)							0.32 (0.19-0.54)	<0.001							0.36 (0.22-0.59)	<0.001
Women (n=1621*)																
Accurate/Under-estimation (Acc. Ref)	0.81 (0.52-1.28)	0.369	0.91 (0.56-1.49)	0.717	0.84 (0.51-1.38)	0.484	0.81 (0.49-1.34)	0.414	0.41 (0.24-0.71)	0.001	0.44 (0.25-0.78)	0.005	0.42 (0.24-0.75)	0.003	0.44 (0.25-0.78)	0.005
Age (continuous)	0.98 (0.96-1.01)	0.182	0.98 (0.96-1.01)	0.177	0.97 (0.95-1.00)	0.029	0.97 (0.95-1.00)	0.037	0.98 (0.96-1.00)	0.062	0.98 (0.96-1.01)	0.060	0.97 (0.94-0.99)	0.012	0.97 (0.94-0.99)	0.010
BMI (continuous)			1.03 (0.98-1.08)	0.236	1.03 (0.98-1.08)	0.262	1.02 (0.97-1.08)	0.417			1.02 (0.97-1.07)	0.526	1.00 (0.95-1.05)	0.974	1.00 (0.95-1.05)	0.970
Low/High education (Low Ref)					0.51 (0.33-0.79)	0.002	0.51 (0.32-0.79)	0.003					0.56 (0.36-0.88)	0.011	0.56 (0.36-0.89)	0.014
Married/Single (Single Ref)							0.60 (0.38-0.93)	0.023							0.49 (0.31-0.77)	0.002

Model 1: Adjustment for age. Model 2: Adjustment for age and BMI. Model 3: Adjustment for age, BMI and education. Model 4: Adjustment for age, BMI, education and marital status. * Due to missing values in reporting educational and marital status, model 2 and 3 comprise slightly smaller samples sizes.

Supplementary figure 1. The four geographical regions included in the study and the municipalities within each. The figure is designed by co-author, Marita Melhus, and is published with permission from Centre for Sami Health Research.

