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## Loneliness amongst older people in Europe: a comparative study of welfare regimes

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Table 1. Descriptive information about socio-demographic, quality of living conditions, level of social integration and loneliness characteristics.

	Anglo-Saxon (n=1363)	Continental (n=3468)	Eastern (n=3234)	Nordic (n=2272)	Southern (n=1052)
Age					
60-74	71.0	71.2	72.2	70.4	61.9
75+	29.0	28.8	27.8	29.6	38.1
Gender					
Men	47.9	50.9	41.1	50.2	48.7
Women	52.1	49.1	58.9	49.8	51.3
Educational level					
Primary	49.7	27.6	48.7	35.3	80.0
Secondary	15.4	39.7	35.4	27.3	6.8
Tertiary	35.0	32.6	15.9	37.4	13.2
Self-rated health					
Good	61.4	52.5	27.4	61.0	38.0
Poor	38.6	47.5	72.6	39.0	62.0
Household size					
1	32.0	24.7	25.5	30.9	15.7
2	56.7	66.0	47.3	64.5	52.1
3 and above	11.3	9.3	27.2	4.5	32.2
Feeling of safety					
Safe	72.9	75.9	77.4	86.8	78.8
Unsafe	27.1	24.1	22.6	13.2	21.2
Marital status					
Married/partnered	62.5	70.7	59.0	61.0	69.6
Divorced/separated	11.8	9.1	6.5	15.3	5.1
Widowed	19.7	15.7	30.8	15.0	21.2
Single (never married)	5.9	4.5	3.7	8.8	4.1
Frequency of being social					
Less than once a month	10.0	7.2	31.7	4.8	10.6
Once a month or more	26.3	39.5	36.1	31.7	17.9
Once a week or more	63.7	53.3	32.1	63.5	71.5
Number of confidants					
0-1	21.7	15.9	34.4	17.9	23.0
2-3	39.3	40.1	38.6	40.9	38.8
4 and above	39.0	44.0	27.0	41.3	38.3
Loneliness					
None or almost none of the					
time	74.0	76.4	59.3	79.7	68.5
Some of the time	19.8	17.8	22.6	15.9	19.9
Most of the time	3.3	3.3	12.4	2.1	7.5
All or almost all of the time	2.9	2.6	5.7	2.3	4.1

Table 2. Prevalence of absence of loneliness by welfare regimes and quality of living conditions and level of social integration variables.

	Anglo-Saxon		Continental		East	ern	Nor	dic	Southern			
	No		No		No		No		No			
	loneliness	p	lonelines	S	loneliness	p	loneliness	p	loneliness	p		
Quality of living conditions:												
Self-rated health												
Good	80.3	≤0.001	83.8	≤0.001	72.8	≤0.001	84.9	≤0.001	70.5	0.209		
Poor	64.0		68.1		54.1		71.5		67.3			
Household size												
1	53.2	≤0.001	48.5	≤0.001	26.1	≤0.001	59.2	≤0.001	32.0	≤0.001		
2	86.2		85.5		73.6		89.3		73.7			
3 and above	72.2		84.9		65.2		84.4		78.1			
Feeling of safety												
Safe	78.0	≤0.001	80.5	≤0.001	62.3	0.001	81.3	0.018	71.5	0.001		
Unsafe	63.6		64.5		52.4		69.9		60.8			
Level of social												
integraton:												
Marital status			0.7.0					0.004				
Married/partnership	84.4	≤0.001	85.8	≤0.001	77.5	≤0.001	89.3	≤0.001	78.1	≤0.001		
Divorced/separated	58.4		62.1		36.4		68.2		52.1			
Widowed	52.7		46.1		32.0		57.5		44.7			
Single	68.2		62.4		38.3		71		58.9			
Frequency of being so	cial											
Less than once a	60.2	≤0.001	73.1	0.062	50.4	≤0.001	67.6	0.197	55.4	0.001		
month Once a month or												
more	73.0		78.0		67.3		80.7		67.9			
Once a week or more	76.6		75.6		58.9		80.1		70.8			
Number of confidants												

0-1	67.9	≤0.001	61.3	≤0.001	52.5	≤0.001	73.8	0.153	59.1	≤0.001
2 to 3	72.0		74.9		58.8		80.1		64.1	
4 and above	79.0		83.1		71.1		82.1		79.8	

Table 3. Odds ratios (OR) and 95 per cent confidence intervals (95% CI) for the absence of loneliness.

	Model 1	Mod	el 2		Model 3		Model 4		Mod	el 5		Mod	el 6	
	OR 95%	CI OR	9:	5% CI	OR	95% CI	OR	95% CI	OR		95% CI	OR		95% CI
Good self-rated health	1.98 *** (1.80	2.19) 1.79	*** (1	1.61-1.98)					1.81	***	(1.64-2.01)	1.71	***	(1.54-1.90)
Household size:														
2	5.27 *** (4.72	5.07) 5.48	*** (4	4.90-6.12)					2.74	***	(2.34-3.22)	2.91	***	(2.48-3.42)
3 and above	3.70 *** (3.19	4.30) 4.54	*** (3	3.88-5.31)					2.21	***	(1.84-2.65)	2.61	***	(2.16-3.16)
Feeling of safety	1.31 *** (1.17	1.46) 1.36	*** (1	1.21-1.52)					1.26	***	(1.13-1.42)	1.3	***	(1.15-1.46)
Marital status:														
Married/partnered					5.53 ***	(4.90-6.25)	5.42 ***	(4.79-6.12)	2.70	***	(2.28-3.18)	2.54	***	(2.15-2.99)
Divorced/separated					1.46 ***	(1.23-1.73)	1.34 **	(1.13-1.60)	1.37	**	(1.15-1.63)	1.27	**	(1.06-1.52)
Single					1.66 ***	(1.33-2.06)	1.55 ***	(1.24-1.92)	1.50	***	(1.20-1.88)	1.42	**	(1.14-1.78)
Frequency of being social:														
Once a month or														
more					1.41 ***	(1.21-1.65)	1.27 ***	(1.09-1.49)	1.34	***	(1.14-1.58)	1.23	*	(1.04-1.45)
Once a week or more					1.61 ***	(1.38-1.86)	1.43 ***	(1 23-1 67)	1.5	***	(1.28-1.75)	1 37	***	(1.17-1.61)
Number of confidents:					1.01	(1.30 1.00)	1.43	(1.23 1.07)	1.5		(1.20 1.73)	1.57		(1.17 1.01)
2-3					1.44 ***	(1.27-1.63)	1.41 ***	(1.24-1.59)	1.39	***	(1.22-1.58)	1.36	***	(1.19-1.55)
4 and above Welfare regimes:					2.13 ***	(1.86-2.43)	2.07 ***				(1.75-2.30)			•
Anglo-Saxon		1.45	*** (1	1.21-1.73)			1.35 **	(1.14-1.61)				1.44	***	(1.20-1.73)
Continental				1.23-1.69)			1.28 **	(1.09-1.49)						(1.19-1.65)

Eastern		0.75 ** (0.63-	0.88)	0.82 * (0.74	-1.06)	0.94 (0.79-1.13)
Nordic		1.91 *** (1.49-	2.44)	1.80 *** (1.44	-2.33)	1.88 *** (1.47-2.42)
Log likelihood	10014.166	9897.519	10077.75	10021.45	9575.434	9522.057
Cox & Snell R2	0.15	0.16	0.15	0.15	0.17	0.18
Nagelkerke R2	0,22	0,23	0,22	0,22	0,25	0,26

Note: Reference categories: self-rated health "poor"; household size "1"; feeling of safety "unsafe"; marital status "widowed"; frequency of being social "less than once a month"; number of confidants "0-1"; welfare regimes "Southern". Welfare regimes are dummy variables. Age group, gender and educational level are controlled for in all models.

Significance levels: \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001.

Table 4. Odds ratios (OR) and 95 per cent confidence intervals (95% CI) for joint effects of welfare regime and quality of living conditions and level of

social integration variables on the absence of loneliness.

	Angle	o-Sax	ion	Conti	nental		Easter	n		Nordic			South	nern	
	OR		95% CI	OR		95% CI	OR		95% CI	OR		95% CI	OR		95% CI
Quality of living conditions:															
Good self-rated health	1.77	***	(1.39-2.26)	2.01	***	(1.72-2.35)	1.68	***	(1.29-2.19)	1.65 *	:	(1.10-2.48)	1.07		(0.82-1.38)
Household size:															
2	2.74	***	(2.08-3.62)	2.98	***	(2.38-3.58)	3.41	***	(2.51-4.62)	2.72 *	**	(1.77-4.19)	3.18	***	(2.21-4.58)
3 and above	1.28		(0.86-1.91)	2.83	***	(2.05-3.91)	2.59	***	(1.87-3.59)	2.11		(0.73-6.08)	4.29	***	(2.89-6.38)
Feeling of safety Level of social integration:	1.22		(0.94-1.58)	1.48	***	(1.25-1.76)	1.13		(0.86-1.47)	1.10		(0.64-1.90)	1.17		(0.87-1.58)
Marital status:															
Married/partnered	1.86	***	(1.36-2.54)	2.53	***	(2.01-3.20)	3.33	***	(2.53-4.38)	1.92 *	:	(1.12-3.29)	2.20	***	(1.62-3.01)
Divorced/separated	0.94		(0.64-1.37)	1.62	***	(1.26-2.15)	0.94		(0.59-1.49)	1.10		(0.61-2.00)	1.01		(0.57-1.77)
Single Frequency of being social:	1.40		(0.85-1.31)	1.71	**	(1.21-2.40)	1.02		(0.56-1.85)	1.15		(0.57-2.04)	1.08		(0.57-2.04)
Once a month or more	1.33		(0.87-2.01)	0.91		(0.67-1.23)	1.44	*	(1.09-1.91)	1.60		(0.65-3.92)	1.44		(0.90-2.31)
Once a week or more	1.95	**	(1.32-2.87)	0.96		(0.71-1.29)	1.12		(0.85-1.49)	1.92		(0.81-4.53)	2.00	**	(1.34-2.98)
Number of confidants:															
2-3	1.37	*	(1.01-1.88)	1.62	***	(1.32-2.00)	1.16		(0.90-1.51)	1.36		(0.78-2.35)	1.16		
4 and above	1.63	**	(1.18-2.54)	2.45	***	(1.97-3.04)	1.5	**	(1.11-2.02)	1.32		(0.76-2.93)	2.22	***	(1.59-3.10)

Note: The results are based on six different specifications for each welfare regime, where we in each model with all main effects of welfare regimes have included also the joint effects of quality of living conditions and level of social integration variables. Control variables included in the estimates are gender, age, educational level, self-rated health, household size, feeling of safety, marital status, frequency of being social and number of confidants. Reference

categories: self-rated health "poor"; household size "1"; feeling of safety "unsafe"; marital status "widowed"; frequency of being social "less than once a month"; number of confidants "0-1".

Significance levels: \* p<0.05, \*\* p<0.01, \*\*\* p<0.001.