Hierarchical cluster analysis of human value priorities and associations with subjective well-being, subjective general health, social life, and depression across Europe

Supplementary Information

The following tables contain relevant findings that were too extensive to include in the manuscript. Table S1 presents the Round 7th of European Social Survey (ESS) sample characterization in terms of residence country, gender, age, highest level of education achieved (International Standard Classification of Education, ISCED), years of full-time education completed, household's total net income and legal marital status, after data cleaning. Table S2 presents the statistical analysis results of the Subjective Well-being (SWB), Social-Life and Depression composite indices (Kolmogorov-Smirnov and Levene's tests), as well as the results of their comparison to Subjective General Health (SGH) (Kruskal–Wallis and Dunn's tests). Finally, Table S3 presents the Spearman correlations matrix between the ten basic human values' priorities and the indices found in each cluster for subjective well-being, SGH, social life and depression.

Table S1. Sample characterization: Count (*N*); row percentage per category (%) or mean (*M*) and standard deviation (*StD*).

Variables	N	% or M (StD)
Country	35,936	
Austria	1,780	4.95
Belgium	1,720	4.79
Switzerland	1,489	4.14
Czech Republic	1,788	4.98
Germany	2,982	8.30
Denmark	1,475	4.10
Estonia	1,982	5.52
Spain	1,857	5.17
Finland	2,044	5.69
France	1,885	5.25
United Kingdom	2,176	6.06
Hungary	1,460	4.06
Ireland	2,288	6.37
Lithuania	2,173	6.05
Netherlands	1,802	5.01
Norway	1,408	3.92
Poland	1,550	4.31
Portugal	1,209	3.36
Sweden	1,755	4.88
Slovenia	1,113	3.10
Gender	35,936	
Male	16,821	46.81
Female	19,115	53.19
Age (years)[a]	35,880	49.27 (18.61)
< 25	4,140	11.50
25-34	4,938	13.70
35-49	8,811	24.50
50-64	9,329	26.00
65-74	5,267	14.70
> 74	3,395	9.40
ES-ISCED highest level of education	35,842	
I - less than lower secondary	3,569	9.93
II - lower secondary	6,254	17.40
IIIb - lower tier upper secondary	6,419	17.86
IIIa - upper tier upper secondary	6,273	17.46
IV - advanced vocational, sub-degree	5,073	14.12
V1 - lower tertiary education, BA level	3,824	10.64
V2 - higher tertiary education, >= MA level	4,327	12.04
Other	103	0.29
Years of full-time education completed[a]	35,660	12.95 (3.96)

Variables	N	% or M (StD)
Household's total net income, all sources (decile)	28,858	
1st	2,737	7.62
2nd	3,066	8.53
3rd	3,021	8.41
4th	3,132	8.72
5th	3,083	8.58
6th	3,030	8.43
7th	2,983	8.30
8th	2,884	8.03
9th	2,388	6.65
10th	2,534	7.05
Legal marital status	35,627	
Legally married	17,479	48.64
In a legally registered civil union	330	0.92
Legally separated	221	0.61
Legally divorced/civil union dissolved	3,690	10.27
Widowed/civil partner died	3,117	8.67
Never married or in legally registered civil union	10,790	30.03

[a] for "Age" and "Years of full-time education completed", the mean and standard deviation were calculated.

Table S2. Kolmogorov-Smirnov, Levene and Kruskal-Wallis tests results (test statistics D, W and X^2, respectively) for Subjective General Health (SGH) and the composite indices' distributions between clusters. Dunn's pairwise tests results indicate the cluster's ranking for significant median differences found and the corresponding effect sizes (η^2). All associated p-values were < .001 and, thus, are not indicated.

Indices	Kolmogorov-Smirnov: D				Levene	Kruskal-Wallis	Dunn	$\eta^{2\,(a)}$
	Cluster 1	Cluster 2	Cluster 3	Cluster 4	W	X^2		
	Social	Growth	Strong Social	Weak Growth				
Subjective well-being (SWB)	.12	0.15	.13	.12	79.77	287.90	1<3<4<2	.01
Subjective general health (SGH)	.26	.26	.23	.26	215.23	1,098.17	3<1<2<4	.04
Social life	.06	.07	.07	.07	42.18	1,611.69	1<3<4<2	.05
Depression	.10	.10	.10	.10	107.42	214.57	2,4<1<3	.01

[a] Effect size: η^2 < .01 – no effect; .01≤ η^2 < .06 – small; .06 ≤ η^2 < .11– intermediate; η^2 ≥ .14 – large (Cohen, 1988).

Table S3. Spearman correlations between human values' priorities and the indicators of subjective well-being (SWB), subjective general health (SGH), social life and depression, for the 4 clusters

Index	Cluster	Openness to change			Self-Enhancement		Conservation			Self-Transcendence	
		SD	ST	HE	AC	PO	SE	TR	CO	BE	UN
SWB	1 - Social	.016	.017	.078***	.019	-.073***	-.063***	-.015	-.024*	.056***	-.033**
	2 - Growth	.023*	.006	.100***	-.030**	-.062***	-.024*	.003	-.027*	.057***	-.016
	3 - Strong Social	.073***	.079***	.067***	-.016	-.090***	-.090***	-.053***	-.023	.031*	-.006
	4 - Weak Growth	.024*	.049***	.064***	.021	-.068***	-.022	-.061***	-.009	.086***	-.045***
SGH	1 - Social	-.005	.117***	.073***	.057***	-.039***	-.126***	-.085***	-.030**	-.012	-.020
	2 - Growth	-.038***	.133***	.006	.060***	.009	-.061***	-.040***	-.019	-.016	-.020
	3 - Strong Social	.045***	.135***	.140***	.027*	-.088***	-.154***	-.129***	-.092***	.029*	.012
	4 - Weak Growth	-.039**	.110***	.050***	.052**	.010	-.024*	-.049***	-.047***	-.031*	-.036**
Social life	1 - Social	.000	.076***	.164***	-.010	-.096***	-.091***	-.057***	-.085***	.071***	-.035***
	2 - Growth	.021	.149***	.136***	-.018	-.036**	-.132***	-.040***	-.064***	.064***	.001
	3 - Strong Social	.015	.101***	.191***	-.033*	-.147***	-.140***	-.054***	-.080***	.093***	-.038**
	4 - Weak Growth	.015	.132***	.172***	.034**	-.099***	-.101***	-.094***	-.153**	.101***	.026*
Depression	1 - Social	-.034**	-.052***	-.041***	.007	.027*	.090***	.018	-.017	.026*	.030**
	2 - Growth	.009	-.010	-.074***	.061***	-.011	.009	-.016	-.052***	.048***	.041***
	3 - Strong Social	-.049***	-.113***	-.159***	-.006	.080***	.172***	.109***	.036**	.027*	.036**
	4 - Weak Growth	.027*	-.029*	-.037**	.013	.014	.001	.014	-.044***	.032**	.039**

Notes: * Significant at *p* < .05 level, ** Significant at *p* < .01 level, *** Significant at *p* < .001 level (two-tailed). (SD - self-direction; ST - stimulation; HE - hedonism; AC - achievement; PO - power; SE - security; TR - tradition; CO - conformity; BE - benevolence; UN - universalism)