

Supplementary Materials for

Emotional experiences and psychological wellbeing in 51 countries during the COVID-19 pandemic

Section A: Supplementary Materials for Study 1

Materials: Wellbeing measures	page 3
Table S1	page 4
Table S2	page 5
Table S3	page 6
Tables S4 -S5	page 7
Intraclass correlation for emotion and wellbeing measures	page 8
Table S6	page 8
Table S7	page 9
Table S8	page 11
Table S9	page 12
Table S10	page 14
Fixed-effect approach for the 51-country dataset	page 15
Table S11	page 16
Table S12	page 17
Further analyses for Study 1	page 18
Further analyses 1(exploratory structural equation modelling)	page 18
Table S13	page 19
Further analyses 2-3 (split sample test, zero-order correlation)	page 20
Table S14	page 21

Section B: Supplementary Materials for Study 2

Table S15	page 22
Factor analysis for wellbeing outcomes	page 23
Table S16	page 24
Table S17	page 25
Table S18	page 28
Table S19	page 30
Transformation of regression coefficients	page 31
Table S20	page 33

Section C: Supplementary Materials for Study 3

Assessment of wellbeing factors and model set-up	page 34
Table S21	page 35
Table S22	page 36
Table S23	page 37
Figure S1	page 38
Figure S2	page 39
Figure S3	page 40
Figure S4	page 41
Figure S5	page 42
Figure S6	page 43

Study 1. Emotions and wellbeing in 51 countries during the COVID-19 pandemic

Materials: Wellbeing measures

Ten items were used to measure wellbeing: two questions measuring resilience, two questions measuring eudaimonic wellbeing (flourishing), one question measuring satisfaction with life, and one item each measuring stress, tiredness, depression, mental health, and physical health (for details see <https://osf.io/s5puc>). The two resilience questions were adapted from Ego resilience 89 (Block & Kremen, 1996) and Resiliency Scale (Hou & Ng, 2014). The items were: “At this moment, I have a high capacity to overcome setbacks.” and “At this moment, I feel that in very difficult situations I am able to respond in positive ways.” Participants answered from 0 (Not at all) to 6 (Very much). The two eudaimonic wellbeing questions were adapted from the Rosenberg Self-Esteem Scale (Rosenberg, 2015) and Questionnaire for Eudaimonic Well-Being (Waterman et al., 2010). The two items were: “At this moment, I feel good about myself.” and “At this moment, I have the feeling that I lead a purposeful and meaningful life.” **Evaluative** wellbeing was measured with a one-item satisfaction with life question: “At this moment, how satisfied are you with your life?” with 0 = Completely dissatisfied, to 10 = (Completely satisfied) (Lucas & Donnellan, 2012). Subjective reported health items were measured with the following questions: “At this moment, I feel physically healthy/ mentally healthy/ stressed/ tired/ depressed.” Answers ranged from 0 (Strongly disagree) to 100 (Strongly agree).

Country	N	Age (SD)	Education (SD)	Female%	Employment%	First date	Last date	Death/million	Stringency
Australia	378	39.33 (15.72)	16.49 (3.46)	60.32%	83.07%	18-Apr	14-May	3.41	64
Brazil	325	43.86 (15.80)	17.92 (4.98)	66.15%	86.15%	21-Apr	15-May	33.89	77
Bulgaria	276	41.08 (12.97)	17.44 (3.60)	76.09%	82.25%	20-Apr	15-May	10.15	70
Canada	286	37.61 (14.24)	17.72 (4.07)	68.53%	80.07%	17-Apr	15-May	86.35	76
Chile	493	32.95 (12.42)	18.62 (3.49)	74.65%	78.09%	19-Apr	14-May	12.13	73
China	2009	35.17 (12.90)	15.54 (3.49)	54.50%	87.41%	18-Apr	14-May	3.22	59
Colombia	237	40.94 (15.80)	17.77 (3.75)	66.24%	84.81%	21-Apr	15-May	6.65	90.08
Croatia	528	28.09 (9.60)	15.20 (2.77)	74.62%	85.61%	20-Apr	08-May	15.68	91.95
Curacao	235	51.54 (13.10)	17.26 (4.36)	74.47%	82.98%	20-Apr	05-May	6.09	NA
Denmark	233	45.07 (17.12)	16.22 (4.82)	70.82%	85.84%	19-Apr	15-May	79	78.15
Egypt	824	23.24 (5.81)	14.73 (3.51)	75.49%	81.92%	18-Apr	15-May	3.82	94
Finland	289	38.93 (19.58)	15.01 (4.62)	72.32%	92.04%	18-Apr	15-May	37.11	75.29
France	363	44.14 (14.23)	15.55 (4.46)	64.74%	82.09%	17-Apr	15-May	362.86	90.79
Georgia	236	30.99 (8.47)	16.64 (4.24)	69.92%	71.61%	20-Apr	10-May	1.71	95
Germany	567	36.82 (13.64)	17.18 (3.87)	62.26%	84.30%	17-Apr	15-May	73.71	72.34
Ghana	328	32.34 (9.96)	17.89 (4.80)	43.90%	82.01%	20-Apr	14-May	0.5	71
Greece	253	38.37 (11.92)	17.69 (3.42)	69.17%	72.33%	20-Apr	13-May	13.2	81.58
Hong Kong	228	32.35 (11.42)	17.16 (3.43)	61.84%	92.98%	18-Apr	15-May	NA	72
Hungary	464	34.26 (12.21)	17.33 (3.47)	66.16%	89.22%	20-Apr	14-May	34.03	74.28
Iceland	354	43.58 (14.29)	7.78 (6.50) ^a	83.33%	75.99%	24-Apr	14-May	29.3	59
India	243	34.11 (14.21)	17.86 (3.59)	62.55%	81.07%	21-Apr	15-May	1.05	86.32
Indonesia	656	31.52 (10.17)	16.71 (3.83)	65.85%	88.11%	18-Apr	10-May	2.75	74.17
Iran	195	36.41 (9.43)	17.04 (3.37)	52.82%	68.21%	20-Apr	07-May	69.17	64
Ireland	362	34.96 (13.57)	16.64 (3.26)	73.48%	79.28%	20-Apr	13-May	234.66	88.75
Israel	211	43.41 (14.50)	14.88 (5.55)	64.93%	80.09%	21-Apr	13-May	25.54	84.78
Italy	466	38.15 (15.92)	16.04 (4.06)	71.03%	84.33%	19-Apr	14-May	459.95	81.73
Japan	1352	42.98 (12.68)	17.50 (3.45)	50.81%	92.68%	18-Apr	14-May	3.39	59.68
Jordan	236	35.75 (12.98)	14.85 (3.99)	57.20%	52.12%	17-Apr	14-May	0.78	86.82
Kazakhstan	291	35.28 (13.05)	15.31 (4.17)	70.45%	77.66%	20-Apr	13-May	1.39	85
Kenya	207	30.89 (11.89)	16.74 (4.08)	41.55%	75.36%	20-Apr	12-May	0.38	88.22
Malaysia	214	33.08 (8.97)	17.39 (4.60)	66.36%	84.58%	18-Apr	13-May	3.09	78.46
Malta	1290	38.07 (14.42)	17.85 (5.11)	65.04%	87.91%	28-Apr	15-May	10.57	NA
Mongolia	208	33.29 (7.54)	15.92 (3.62)	77.88%	88.46%	11-May	14-May	0	70
Netherlands	1348	38.57 (13.06)	17.43 (3.84)	71.29%	78.78%	17-Apr	15-May	273.16	84.62
New Zealand	262	35.50 (13.44)	17.08 (3.91)	72.14%	83.59%	20-Apr	15-May	3.93	88.73
Pakistan	557	24.97 (9.68)	14.95 (3.37)	49.01%	89.95%	25-Apr	15-May	2.28	94
Peru	357	46.39 (16.52)	18.19 (4.01)	66.67%	83.47%	19-Apr	14-May	34.57	94.69
Russia	586	36.38 (12.36)	16.74 (3.92)	78.16%	87.20%	19-Apr	15-May	8.15	92
Serbia	354	41.94 (11.23)	15.33 (2.79)	67.23%	80.51%	20-Apr	13-May	25.88	94.13
Singapore	208	36.21 (13.46)	16.56 (3.17)	59.13%	87.50%	19-Apr	14-May	2.7	86.54
South Africa	426	37.07 (14.19)	16.64 (3.81)	69.72%	81.22%	20-Apr	15-May	2.17	88.88
Spain	418	47.74 (16.00)	18.61 (5.18)	70.10%	88.52%	18-Apr	14-May	520.09	87.37
Sweden	529	50.06 (15.07)	17.23 (4.22)	65.97%	87.71%	18-Apr	12-May	239.42	57.28
Syria	248	33.68 (10.99)	15.96 (4.05)	64.11%	80.24%	17-Apr	14-May	0.17	83.86
Taiwan	761	39.24 (13.38)	17.87 (4.13)	66.23%	88.30%	19-Apr	15-May	0.26	35
T&T ^b	334	35.80 (10.48)	18.50 (3.86)	79.04%	79.04%	29-Apr	12-May	5.72	92
Turkey	346	41.61 (14.71)	16.63 (3.58)	57.23%	84.10%	17-Apr	14-May	35.55	89
Ukraine	698	33.11 (9.89)	15.85 (2.49)	62.03%	79.23%	21-Apr	15-May	6.67	94
UK	662	38.92 (14.55)	17.91 (3.87)	73.41%	90.33%	18-Apr	15-May	388.1	76.57
USA	952	37.52 (14.34)	18.44 (3.92)	71.01%	85.82%	17-Apr	15-May	186.35	70.55
Vietnam	338	33.61 (9.07)	17.14 (3.30)	67.75%	86.69%	21-Apr	10-May	0	81.25

Table S1. Demographic information and data collection information in each country

Notes:

- Due to a translation error, education in Iceland was translated as “how many years of education have you finished after primary school”? In Iceland, mandatory education is between the ages of 6 and 16 years, so the mean education reported in Iceland is equivalent to 17.78 years.
- T & T refers to Trinidad and Tobago
- Deaths per million and stringency both refer to the mean value for each country’s data collection period
- Data collection was conducted in the year of 2020

Country	Admiration	Calm	Compassion	Determination	Moved	Gratitude	Hope	Love	Relief	Pleasure	Anger	Anxiety	Boredom	Confusion	Disgust	Fear	Frustration	Loneliness	Regret	Sadness
Australia	3.27 (1.82)	3.81 (1.50)	3.95 (1.65)	3.61 (1.61)	3.35 (1.81)	4.05 (1.64)	4.02 (1.52)	4.10 (1.69)	2.37 (1.74)	3.30 (1.76)	2.02 (1.75)	3.00 (1.82)	2.79 (1.98)	2.37 (1.73)	1.64 (1.73)	2.08 (1.62)	2.53 (1.83)	2.25 (1.94)	1.63 (1.65)	2.44 (1.80)
Brazil	3.53 (1.74)	3.41 (1.49)	4.62 (1.34)	3.73 (1.58)	4.44 (1.58)	4.38 (1.62)	3.78 (1.64)	4.49 (1.48)	2.24 (1.68)	3.82 (1.69)	2.84 (1.94)	4.29 (1.64)	3.10 (2.03)	2.77 (2.01)	1.54 (1.86)	3.58 (1.76)	3.45 (1.93)	2.53 (2.07)	1.90 (1.87)	3.29 (1.82)
Bulgaria	2.50 (1.97)	3.32 (1.72)	4.29 (1.62)	3.56 (1.69)	3.58 (1.86)	3.96 (1.90)	3.70 (1.75)	4.22 (1.73)	2.16 (1.67)	3.92 (1.88)	3.19 (2.06)	3.28 (1.83)	2.53 (2.22)	2.55 (2.10)	1.68 (2.01)	2.55 (1.95)	3.03 (2.08)	2.37 (2.15)	2.89 (2.01)	3.28 (1.93)
Canada	3.00 (1.85)	3.32 (1.58)	4.04 (1.53)	3.40 (1.61)	3.27 (1.68)	4.03 (1.58)	3.37 (1.48)	4.05 (1.71)	2.28 (1.61)	3.40 (1.73)	2.57 (1.79)	3.71 (1.83)	3.09 (1.98)	2.63 (1.80)	2.17 (1.90)	2.72 (1.79)	3.57 (1.70)	2.92 (2.03)	2.17 (1.83)	3.24 (1.83)
Chile	2.88 (1.92)	2.92 (1.55)	3.89 (1.70)	3.38 (1.70)	3.90 (1.74)	3.97 (1.78)	3.15 (1.72)	4.19 (1.68)	2.11 (1.57)	3.46 (1.72)	3.56 (1.91)	4.68 (1.50)	3.17 (2.02)	3.62 (1.83)	1.39 (1.72)	3.51 (1.83)	4.09 (1.75)	2.84 (2.06)	2.33 (1.95)	3.78 (1.74)
China	4.36 (1.73)	3.91 (1.68)	4.24 (1.70)	4.17 (1.69)	4.43 (1.70)	4.21 (1.76)	4.53 (1.63)	4.58 (1.55)	2.09 (1.85)	3.48 (1.78)	1.96 (1.81)	2.63 (1.88)	2.33 (1.95)	2.28 (1.81)	1.75 (1.75)	1.82 (1.73)	1.82 (1.76)	1.82 (1.83)	1.48 (1.70)	2.26 (1.85)
Colombia	3.58 (1.98)	3.83 (1.50)	4.11 (1.75)	4.03 (1.61)	4.13 (1.66)	4.63 (1.59)	4.64 (1.71)	4.64 (1.54)	2.83 (1.73)	3.78 (1.77)	2.65 (2.00)	3.62 (1.87)	2.96 (2.02)	2.61 (1.95)	0.97 (1.50)	2.72 (1.91)	3.17 (1.98)	2.12 (2.04)	1.57 (1.65)	2.96 (1.85)
Croatia	2.55 (1.68)	3.34 (1.49)	2.92 (1.66)	3.51 (1.45)	2.67 (1.67)	3.93 (1.59)	3.68 (1.45)	4.23 (1.62)	2.64 (1.56)	4.02 (1.50)	3.14 (1.79)	3.49 (1.82)	3.02 (2.00)	2.89 (1.79)	1.76 (1.80)	2.74 (1.82)	3.42 (1.81)	2.67 (1.96)	2.80 (1.71)	2.99 (1.76)
Curacao	3.61 (1.82)	4.00 (1.60)	4.74 (1.19)	3.98 (1.57)	3.48 (1.66)	4.43 (1.67)	4.10 (1.54)	4.37 (1.55)	2.48 (1.70)	3.38 (1.74)	2.52 (1.94)	3.72 (1.76)	2.61 (2.09)	2.19 (1.84)	1.98 (2.03)	2.53 (1.92)	3.03 (1.94)	1.99 (1.96)	1.51 (1.71)	2.75 (1.98)
Denmark	2.68 (1.61)	3.50 (1.61)	4.06 (1.49)	3.36 (1.61)	3.13 (1.57)	3.94 (1.57)	3.61 (1.54)	4.21 (1.63)	2.36 (1.59)	3.71 (1.68)	2.19 (1.82)	2.78 (1.89)	2.42 (2.01)	2.27 (1.83)	1.51 (1.76)	2.03 (1.76)	3.24 (1.89)	2.33 (1.98)	1.64 (1.68)	2.00 (1.87)
Egypt	2.55 (1.88)	3.61 (1.73)	4.17 (1.71)	3.16 (1.73)	4.02 (1.69)	3.78 (1.71)	3.78 (1.78)	3.35 (2.13)	2.90 (1.64)	3.79 (1.73)	4.07 (1.74)	4.10 (1.71)	4.69 (1.69)	3.23 (1.94)	3.10 (2.05)	3.56 (1.95)	3.42 (2.00)	3.69 (2.14)	2.71 (2.13)	4.05 (1.80)
Finland	2.70 (1.59)	3.71 (1.41)	4.01 (1.41)	3.51 (1.35)	3.03 (1.71)	3.77 (1.57)	3.58 (1.26)	3.72 (1.76)	2.50 (1.42)	3.67 (1.57)	2.01 (1.71)	3.30 (1.75)	3.38 (1.98)	2.44 (1.82)	1.72 (1.69)	2.46 (1.62)	3.77 (1.74)	2.69 (1.93)	1.58 (1.59)	2.93 (1.69)
France	3.19 (1.84)	3.70 (1.64)	3.91 (1.65)	3.65 (1.64)	3.20 (1.75)	3.48 (1.81)	3.45 (1.59)	4.09 (1.68)	2.01 (1.69)	3.56 (1.70)	2.63 (1.97)	3.09 (1.91)	2.27 (2.04)	2.17 (1.89)	1.56 (1.93)	2.18 (1.87)	3.15 (1.91)	2.08 (2.01)	1.64 (1.77)	2.64 (1.93)
Georgia	2.52 (1.86)	3.26 (1.70)	4.44 (1.51)	3.68 (1.82)	3.42 (1.79)	3.85 (1.73)	4.00 (1.65)	4.31 (1.80)	2.29 (1.75)	3.24 (1.91)	3.24 (1.97)	3.47 (1.80)	3.63 (1.81)	2.32 (1.90)	1.43 (1.83)	2.50 (1.88)	2.97 (1.93)	2.44 (2.12)	2.50 (1.93)	3.28 (1.96)
Germany	2.67 (1.88)	3.41 (1.78)	4.13 (1.58)	3.29 (1.66)	3.48 (1.71)	3.77 (1.78)	3.42 (1.68)	3.84 (1.88)	2.45 (1.69)	3.65 (1.81)	2.55 (1.85)	3.27 (1.81)	2.55 (2.10)	2.50 (1.97)	1.33 (1.68)	2.45 (1.83)	3.19 (1.94)	2.48 (2.07)	2.08 (1.84)	2.99 (1.85)
Ghana	3.50 (1.65)	4.17 (1.47)	4.47 (1.36)	4.38 (1.32)	3.33 (1.66)	4.41 (1.44)	4.72 (1.24)	4.43 (1.42)	3.20 (1.68)	3.39 (1.84)	1.98 (1.81)	2.94 (1.96)	3.41 (2.06)	2.14 (1.91)	1.95 (1.79)	2.61 (2.01)	2.54 (1.97)	2.62 (2.11)	1.80 (1.80)	2.51 (1.97)
Greece	2.39 (1.90)	3.38 (1.58)	3.87 (1.66)	3.43 (1.66)	3.30 (1.90)	4.52 (1.82)	3.41 (1.68)	4.33 (1.57)	2.26 (1.60)	3.63 (1.70)	3.02 (1.95)	3.75 (1.76)	2.73 (1.99)	2.66 (1.95)	1.83 (2.07)	2.63 (1.95)	3.45 (1.93)	2.59 (2.05)	1.90 (1.89)	3.24 (1.88)
Hong Kong	2.88 (1.82)	3.21 (1.45)	3.41 (1.66)	3.22 (1.54)	2.99 (1.66)	3.37 (1.61)	3.25 (1.45)	3.61 (1.51)	1.91 (1.56)	3.23 (1.46)	2.74 (1.78)	3.08 (1.78)	2.97 (1.92)	2.69 (1.74)	2.59 (1.86)	2.44 (1.71)	2.61 (1.84)	2.44 (1.94)	1.94 (1.75)	2.63 (1.72)
Hungary	2.76 (1.84)	3.34 (1.75)	4.10 (1.54)	3.48 (1.70)	2.97 (1.87)	3.77 (1.71)	3.77 (1.63)	4.12 (1.89)	2.34 (1.69)	3.38 (1.83)	2.60 (1.91)	3.48 (1.88)	2.61 (2.27)	2.51 (2.00)	1.38 (1.75)	2.66 (1.94)	3.34 (1.93)	2.72 (2.21)	2.13 (1.88)	3.07 (1.88)
Iceland	3.46 (1.86)	3.29 (1.75)	4.39 (1.59)	3.59 (1.60)	2.52 (1.88)	4.49 (1.49)	4.02 (1.57)	4.32 (1.58)	2.63 (1.69)	3.34 (1.74)	1.67 (1.79)	3.07 (1.98)	2.86 (2.12)	2.21 (1.94)	1.81 (1.93)	2.23 (1.87)	2.15 (1.89)	2.46 (2.17)	1.54 (1.78)	2.58 (1.97)
India	3.53 (1.57)	3.64 (1.56)	4.07 (1.50)	3.72 (1.66)	3.03 (1.86)	4.12 (1.65)	3.92 (1.67)	3.92 (1.64)	2.60 (1.73)	3.44 (1.83)	2.60 (1.87)	3.45 (1.86)	3.00 (1.96)	2.59 (2.00)	1.72 (1.86)	2.74 (1.88)	2.98 (2.08)	2.33 (2.11)	2.08 (2.05)	2.85 (1.98)
Indonesia	3.20 (1.57)	3.83 (1.33)	4.53 (1.24)	3.82 (1.30)	4.04 (1.31)	4.90 (1.16)	4.58 (1.36)	4.12 (1.51)	2.98 (1.42)	3.34 (1.52)	2.67 (1.63)	3.40 (1.74)	3.75 (1.89)	2.72 (1.82)	1.57 (1.55)	3.13 (1.75)	2.22 (1.87)	2.54 (1.98)	2.07 (1.64)	2.92 (1.73)
Iran	2.39 (1.73)	2.78 (1.80)	3.78 (1.69)	3.31 (1.58)	3.17 (1.83)	3.19 (1.91)	3.07 (1.78)	3.02 (1.99)	2.82 (1.68)	3.48 (1.68)	3.16 (1.88)	3.54 (1.87)	3.63 (2.03)	3.52 (1.96)	3.07 (2.08)	2.98 (1.93)	3.04 (1.92)	2.93 (2.05)	2.65 (1.99)	3.53 (1.89)
Ireland	3.71 (1.81)	3.35 (1.56)	4.09 (1.58)	3.52 (1.65)	3.48 (1.72)	4.19 (1.54)	3.68 (1.51)	4.20 (1.66)	2.56 (1.68)	3.48 (1.72)	2.70 (1.88)	3.75 (1.74)	3.42 (2.07)	2.64 (1.86)	2.19 (1.88)	2.88 (1.86)	3.69 (1.76)	2.96 (2.05)	2.03 (1.78)	3.48 (1.79)
Israel	2.05 (1.90)	3.28 (1.43)	4.10 (1.30)	3.40 (1.51)	3.15 (1.61)	3.94 (1.52)	3.76 (1.29)	4.09 (1.61)	2.51 (1.44)	3.59 (1.48)	2.47 (1.71)	2.86 (1.77)	2.01 (1.90)	2.35 (1.92)	1.14 (1.53)	2.21 (1.78)	3.25 (1.69)	2.10 (1.76)	1.81 (1.66)	2.75 (1.76)
Italy	2.95 (1.89)	3.31 (1.52)	3.63 (1.72)	3.68 (1.56)	3.29 (1.82)	3.40 (1.75)	3.83 (1.56)	3.92 (1.69)	2.17 (1.52)	3.41 (1.55)	2.86 (1.94)	3.32 (1.85)	3.00 (2.03)	2.90 (1.86)	1.98 (1.90)	2.65 (1.81)	3.31 (1.97)	2.53 (1.97)	2.37 (1.91)	3.32 (1.75)
Japan	2.62 (1.53)	3.55 (1.27)	3.55 (1.38)	2.97 (1.52)	2.80 (1.53)	3.94 (1.46)	2.68 (1.39)	3.63 (1.52)	2.38 (1.42)	2.74 (1.49)	2.81 (1.77)	3.64 (1.67)	3.20 (1.94)	2.40 (1.76)	2.82 (1.77)	2.64 (1.75)	3.11 (1.74)	2.05 (1.84)	1.98 (1.64)	2.62 (1.72)
Jordan	3.10 (1.97)	3.96 (1.81)	4.36 (1.71)	3.76 (1.85)	3.90 (1.78)	3.96 (1.77)	4.39 (1.76)	3.62 (2.14)	3.18 (1.88)	3.77 (1.89)	3.54 (1.92)	3.62 (1.93)	4.33 (1.83)	2.82 (1.93)	2.64 (2.21)	2.69 (2.02)	3.12 (2.09)	3.30 (2.16)	2.49 (2.21)	3.70 (1.93)
Kazakhstan	2.42 (1.95)	3.44 (1.66)	3.59 (1.74)	3.25 (1.78)	2.58 (2.02)	3.36 (1.86)	3.73 (1.77)	3.65 (2.07)	2.62 (1.82)	3.07 (1.87)	2.56 (1.98)	3.15 (2.02)	2.50 (2.13)	2.65 (2.02)	1.51 (1.83)	2.32 (1.99)	2.64 (2.07)	2.06 (2.17)	2.79 (2.01)	3.06 (1.92)
Kenya	3.26 (1.82)	3.51 (1.66)	4.02 (1.55)	4.21 (1.48)	3.45 (1.64)	4.16 (1.64)	4.18 (1.57)	4.11 (1.64)	2.69 (1.67)	3.47 (1.87)	2.57 (1.94)	3.52 (1.85)	3.79 (2.06)	2.86 (1.97)	2.37 (1.98)	3.41 (2.04)	3.36 (1.89)	3.12 (2.08)	2.24 (2.02)	2.95 (1.89)
Malaysia	3.75 (1.49)	4.01 (1.24)	4.33 (1.43)	3.75 (1.41)	3.39 (1.69)	3.49 (1.82)	4.35 (1.53)	4.46 (1.41)	3.58 (1.33)	3.73 (1.75)	2.59 (1.81)	3.60 (1.66)	3.28 (2.05)	2.24 (1.80)	2.29 (1.94)	2.64 (1.83)	2.64 (1.79)	2.40 (2.12)	2.02 (1.74)	2.82 (1.73)
Malta	3.18 (1.82)	3.08 (1.60)	3.77 (1.62)	3.48 (1.61)	3.30 (1.81)	3.92 (1.62)	3.55 (1.55)	4.03 (1.64)	2.48 (1.60)	3.33 (1.73)	3.10 (1.94)	3.80 (1.86)	2.88 (2.16)	2.86 (1.97)	2.33 (1.95)	2.78 (1.90)	3.92 (1.80)	2.68 (2.05)	2.50 (1.95)	3.56 (1.83)
Mongolia	3.01 (1.72)	3.60 (1.51)	3.35 (1.55)	3.14 (1.54)	3.04 (1.72)	3.84 (1.51)	4.09 (1.44)	4.18 (1.58)	2.89 (1.59)	3.12 (1.68)	2.46 (1.69)	3.30 (1.72)	2.72 (1.88)	2.75 (1.81)	2.30 (1.74)	2.84 (1.68)	2.72 (1.68)	2.41 (1.94)	2.56 (1.82)	2.62 (1.68)
Netherlands	2.98 (1.73)	3.47 (1.52)	4.06 (1.56)	3.43 (1.54)	3.34 (1.68)	3.97 (1.66)	3.45 (1.53)	4.02 (1.69)	2.28 (1.57)	3.55 (1.61)	2.64 (1.83)	3.59 (1.70)	2.84 (2.01)	2.71 (1.87)	1.71 (1.84)	2.60 (1.78)	3.39 (1.79)	2.64 (1.98)	1.73 (1.72)	3.05 (1.81)
New Zealand	3.23 (1.77)	3.71 (1.73)	3.86 (1.56)	3.43 (1.62)	3.10 (1.66)	3.93 (1.59)	3.90 (1.55)	4.08 (1.55)	2.39 (1.73)	3.42 (1.71)	1.92 (1.77)	3.17 (1.87)	2.90 (2.06)	2.27 (1.79)	1.54 (1.63)	1.98 (1.78)	2.88 (2.02)	2.30 (2.06)	1.59 (1.67)	2.46 (1.83)
Pakistan	3.17 (1.62)	3.50 (1.61)	3.58 (1.56)	3.51 (1.58)	3.05 (1.67)	3.74 (1.64)	4.28 (1.50)	3.56 (1.82)	3.03 (1.69)	3.10 (1.78)	3.08 (1.84)	3.58 (1.89)	3.76 (1.92)	3.13 (1.85)	2.34 (1.80)	2.88 (1.89)	3.45 (1.94)	3.09 (2.06)	2.54 (1.98)	3.36 (1.87)
Peru	3.76 (1.84)	3.79 (1.50)	4.49 (1.51)	4.10 (1.45)	4.43 (1.51)	4.80 (1.41)	3.99 (1.46)	4.75 (1.32)	2.75 (1.63)	3.70 (1.77)	2.42 (2.00)	3.62 (1.76)	2.41 (1.97)	2.52 (1.98)	1.26 (1.68)	2.94 (1.92)	3.25 (2.01)	1.77 (1.81)	1.50 (1.62)	3.11 (1.82)
Russia	2.56 (1.77)	3.35 (1.52)	3.56 (1.65)	3.05 (1.57)	2.51 (1.72)	3.43 (1.69)	3.51 (1.60)	3.72 (1.78)	2.11 (1.70)	3.36 (1.74)	2.51 (1.85)	3.36 (1.74)	2.14 (1.97)	2.58 (1.81)	1.65 (1.83)	2.39 (1.77)	2.71 (1.98)	2.17 (2.04)	2.85 (1.82)	3.29 (1.75)
Serbia	2.70 (1.85)	3.52 (1.58)	4.32 (1.46)	3.79 (1.57)	3.33 (1.77)	3.55 (1.84)	3.88 (1.64)	4.23 (1.64)	2.33 (1.68)	3.58 (1.68)	3.04 (1.91)	3.19 (1.82)	2.62 (2.03)	2.65 (1.87)	2.10 (1.97)	2.42 (1.79)	2.75 (1.95)	2.20 (2.01)	2.95 (1.94)	2.98 (1.82)
Singapore	3.45 (1.71)	3.65 (1.53)	4.13 (1.43)	3.73 (1.54)	3.45 (1.67)	4.22 (1.49)	3.88 (1.50)	4.06 (1.52)	2.89 (1.59)	3.08 (1.72)	2.63 (1.74)	3.56 (1.62)	3.33 (1.89)	2.35 (1.74)	2.23 (1.75)	2.71 (1.68)	3.37 (1.66)	2.62 (2.00)	2.22 (1.79)	2.98 (1.80)
South Africa	3.22 (1.74)	3.61 (1.47)	4.21 (1.51)	3.72 (1.57)	3.38 (1.71)	4.64 (1.38)	3.98 (1.56)	4.45 (1.49)	2.60 (1.60)	3.51 (1.72)	2.56 (1.85)	3.59 (1.84)	2.88 (2.14)	2.77 (1.94)	1.98 (1.82)	2.93 (1.93)	3.83 (1.78)	2.54 (2.11)	2.05 (1.86)	3.12 (1.80)
Spain	3.75 (1.82)	3.80 (1.44)	4.02 (1.65)	3.77 (1.53)	3.91 (1.54)	4.15 (1.64)	3.89 (1.52)	4.39 (1.54)	2.37 (1.67)	3.41 (1.72)	2.65 (2.00)	3.23 (1.75)	2.23 (1.94)	2.77 (1.88)	2.20 (2.00)	2.40 (1.78)	2.99 (1.86)	2.08 (1.93		

Country	Wellness	Resilience	Health	Distress
Australia	4.02 (1.25)	4.26 (1.24)	4.45 (1.36)	2.76 (1.64)
Brazil	3.91 (1.29)	4.11 (1.32)	4.17 (1.46)	2.93 (1.68)
Bulgaria	3.88 (1.37)	4.22 (1.36)	4.58 (1.29)	2.40 (1.71)
Canada	3.54 (1.38)	3.94 (1.35)	4.05 (1.40)	3.04 (1.64)
Chile	3.74 (1.36)	4.11 (1.22)	3.79 (1.47)	3.41 (1.57)
China	4.18 (1.36)	4.41 (1.37)	4.83 (1.33)	2.69 (1.64)
Colombia	4.42 (1.22)	4.47 (1.19)	4.63 (1.28)	2.71 (1.63)
Croatia	3.76 (1.28)	3.90 (1.27)	4.47 (1.30)	2.76 (1.69)
Curacao	4.08 (1.23)	4.49 (1.15)	4.83 (1.14)	2.16 (1.66)
Denmark	3.93 (1.32)	4.08 (1.33)	4.61 (1.23)	2.31 (1.61)
Egypt	3.81 (1.45)	3.78 (1.40)	3.12 (1.59)	2.63 (1.70)
Finland	4.00 (1.27)	4.28 (1.11)	4.40 (1.22)	2.77 (1.66)
France	3.70 (1.31)	4.05 (1.32)	4.60 (1.31)	2.39 (1.62)
Georgia	3.62 (1.42)	4.25 (1.33)	4.91 (1.22)	2.84 (1.77)
Germany	3.56 (1.48)	3.73 (1.50)	4.28 (1.55)	2.65 (1.68)
Ghana	4.48 (1.09)	4.60 (1.09)	4.83 (1.12)	2.18 (1.71)
Greece	3.81 (1.33)	4.08 (1.27)	4.29 (1.31)	2.80 (1.59)
Hong Kong	3.51 (1.22)	3.84 (1.23)	4.25 (1.13)	3.41 (1.48)
Hungary	3.88 (1.36)	4.12 (1.37)	4.52 (1.42)	2.88 (1.76)
Iceland	3.83 (1.36)	4.07 (1.40)	3.93 (1.56)	2.59 (1.62)
India	3.88 (1.43)	4.27 (1.24)	4.33 (1.46)	2.46 (1.77)
Indonesia	4.43 (0.96)	4.11 (1.05)	4.86 (1.00)	2.23 (1.64)
Iran	3.02 (1.60)	3.36 (1.51)	3.72 (1.63)	3.03 (1.85)
Ireland	3.59 (1.32)	4.01 (1.27)	3.98 (1.44)	2.86 (1.56)
Israel	4.09 (1.15)	4.33 (1.10)	4.80 (1.02)	2.58 (1.65)
Italy	3.71 (1.25)	3.97 (1.20)	4.46 (1.26)	2.90 (1.54)
Japan	3.52 (1.28)	3.53 (1.29)	4.37 (1.31)	2.65 (1.49)
Jordan	4.01 (1.50)	4.20 (1.57)	4.03 (1.72)	2.52 (1.82)
Kazakhstan	3.90 (1.43)	4.02 (1.55)	4.54 (1.45)	2.50 (1.92)
Kenya	4.01 (1.27)	4.14 (1.34)	4.21 (1.49)	2.47 (1.69)
Malaysia	4.26 (1.22)	4.20 (1.16)	4.57 (1.30)	2.34 (1.66)
Malta	3.46 (1.34)	3.72 (1.33)	3.84 (1.42)	3.20 (1.60)
Mongolia	4.08 (1.23)	3.63 (1.22)	4.44 (1.38)	2.68 (1.61)
Netherlands	3.72 (1.30)	3.95 (1.30)	4.35 (1.24)	2.68 (1.57)
New Zealand	3.77 (1.38)	4.08 (1.26)	4.34 (1.41)	2.74 (1.67)
Pakistan	3.87 (1.34)	3.69 (1.42)	4.08 (1.57)	2.78 (1.76)
Peru	4.53 (1.06)	4.61 (1.00)	4.84 (1.17)	2.53 (1.53)
Russia	3.79 (1.32)	3.86 (1.38)	4.53 (1.24)	2.74 (1.75)
Serbia	4.07 (1.25)	4.41 (1.24)	4.86 (1.19)	2.31 (1.62)
Singapore	3.88 (1.14)	4.13 (1.13)	4.43 (1.21)	2.80 (1.64)
South Africa	3.84 (1.25)	4.27 (1.25)	4.29 (1.46)	2.76 (1.70)
Spain	4.22 (1.16)	4.36 (1.21)	4.53 (1.29)	2.46 (1.64)
Sweden	4.05 (1.27)	3.85 (1.32)	4.73 (1.23)	2.45 (1.53)
Syria	3.51 (1.76)	3.75 (1.78)	3.47 (1.83)	2.00 (1.87)
Taiwan	4.00 (1.18)	4.23 (1.15)	4.64 (1.09)	2.80 (1.51)
T & T	3.54 (1.41)	3.96 (1.35)	3.77 (1.46)	3.20 (1.73)
Turkey	3.74 (1.28)	3.96 (1.34)	4.32 (1.41)	2.70 (1.79)
Ukraine	3.81 (1.25)	4.08 (1.36)	4.47 (1.23)	2.94 (1.79)
UK	3.60 (1.34)	3.97 (1.31)	4.24 (1.38)	2.84 (1.62)
USA	3.79 (1.32)	4.19 (1.27)	4.24 (1.31)	3.36 (1.55)
Vietnam	4.20 (1.13)	4.52 (1.11)	4.68 (1.08)	1.86 (1.49)

Table S3. Mean level (SD) of wellbeing by country

Notes:

a. T&T: Trinidad and Tobago

b. An interactive visualization of the data is available at

<https://covidemotions.shinyapps.io/shinymap/>

Items	Wellness	Resilience	Health	Distress
euda1 ¹	0.57	0.24	0.10	-0.07
euda2	0.82	0.09	-0.03	0.03
swl	0.66	-0.08	0.12	-0.10
res1	0.07	0.76	0.04	0.02
res2	-0.01	0.91	-0.01	-0.03
mental	0.21	0.01	0.63	-0.13
physical	-0.07	0.03	0.80	0.05
stressed	0.03	-0.03	0.06	0.85
tired	0.08	-0.02	-0.09	0.74
depressed	-0.22	0.04	-0.03	0.66
Factors	Wellness	Resilience	Health	Distress
Wellness	1.00			
Resilience	0.74	1.00		
Health	0.57	0.45	1.00	
Distress	-0.49	-0.37	-0.43	1.00

Table S4. The 4-factor structure of wellbeing in the global sample

Model	RMSEA	CFI	SRMR
2-factor	0.052	0.868	0.047
3-factor	0.052	0.909	0.059
4-factor	0.030	0.982	0.011

Table S5. The 4-factor structure of wellbeing outperformed 2- and 3-factor structures

¹ Exact wellbeing items could be found on <https://osf.io/s5puc/>

Intraclass correlation for emotion and wellbeing measures

We calculated the intraclass correlation (ICC) for each emotion and well-being measure under the following random-effects ANOVA model

$$Y_{ij} = \mu + \pi_j + \varepsilon_{ij}, \quad (1)$$

in which Y_{ij} is the outcome variable for person i in country j , π_j is the country-level random effect, and ε_{ij} denotes the person-level error term. π_j and ε_{ij} for all i 's and j 's are assumed to be mutually independent. ICC is defined as the correlation between two observations sampled from the same country, which further equals to

$$\widehat{\text{ICC}} = \frac{\hat{\sigma}_{\pi}^2}{\hat{\sigma}_{\pi}^2 + \hat{\sigma}_{\varepsilon}^2} \quad (2)$$

in which σ_{π}^2 and σ_{ε}^2 are the variances of π_j and ε_{ij} , respectively. In practice, the variance components in Equation 2 can be estimated by restricted maximum likelihood (REML).

Positive emotions	Admiration	Calm	Compassion	Determined	Moved	Gratitude	Hope	Love	Relief	Pleasure
	0.081	0.032	0.046	0.035	0.068	0.059	0.064	0.038	0.045	0.019
Negative emotions	Anger	Anxiety	Boredom	Confusion	Disgust	Fear	Frustration	Lonely	Regret	Sadness
	0.060	0.049	0.070	0.031	0.067	0.046	0.070	0.036	0.057	0.054
Wellbeing	Wellness	Resilience	Health	Distress						
	0.043	0.038	0.071	0.036						

Table S6. Intraclass correlations for emotion and wellbeing measures

	Wellness			Resilience			Health			Distress		
	F	F ¹	R ²	F	F	R	F	F	R	F	F	R
Age	0.217*** (0.009)	0.022** (0.008)	0.022** (0.008)	0.189*** (0.01)	0.035*** (0.009)	0.038*** (0.009)	0.206*** (0.01)	0.060*** (0.009)	0.060*** (0.009)	-0.341*** (0.012)	-0.108*** (0.01)	-0.105*** (0.01)
Gender	0.092*** (0.019)	0.079*** (0.015)	0.079*** (0.015)	0.136*** (0.019)	0.103*** (0.017)	0.100*** (0.017)	0.152*** (0.02)	0.060*** (0.018)	0.061*** (0.018)	-0.317*** (0.024)	-0.075*** (0.019)	-0.071*** (0.019)
Education	0.016 (0.009)	0.016* (0.007)	0.018* (0.007)	0.029** (0.009)	0.029*** (0.008)	0.029*** (0.008)	0.008 (0.01)	0.01 (0.008)	0.012 (0.008)	0.040*** (0.012)	0.038*** (0.009)	0.037*** (0.009)
Subjective SES	0.378*** (0.009)	0.235*** (0.007)	0.231*** (0.007)	0.251*** (0.009)	0.139*** (0.008)	0.135*** (0.008)	0.264*** (0.01)	0.151*** (0.008)	0.150*** (0.008)	-0.207*** (0.012)	-0.060*** (0.009)	-0.059*** (0.009)
Admiration		0.013 (0.008)	0.017 (0.011)		-0.001 (0.009)	-0.001 (0.01)		0.014 (0.01)	0.012 (0.012)	-0.030** (0.011)	-0.026* (0.011)	
Calm		0.135*** (0.008)	0.128*** (0.011)		0.137*** (0.009)	0.129*** (0.012)		0.150*** (0.01)	0.155*** (0.012)	-0.164*** (0.011)	-0.161*** (0.015)	
Compassion		0.021** (0.008)	0.020* (0.01)		0.061*** (0.009)	0.061*** (0.012)		0.025** (0.01)	0.024* (0.011)	0.013 (0.01)	0.016 (0.012)	
Determination		0.198*** (0.008)	0.194*** (0.01)		0.288*** (0.009)	0.282*** (0.012)		0.123*** (0.01)	0.131*** (0.013)	-0.049*** (0.01)	-0.047*** (0.012)	
Moved		0.011 (0.008)	0.019* (0.01)		0.005 (0.009)	0.008 (0.011)		-0.011 (0.01)	-0.005 (0.012)	0.001 (0.011)	0.001 (0.013)	
Gratitude		0.082*** (0.009)	0.081*** (0.01)		0.071*** (0.01)	0.066*** (0.011)		0.023* (0.01)	0.025* (0.011)	-0.019 (0.011)	-0.02 (0.011)	
Hope		0.194*** (0.009)	0.195*** (0.013)		0.174*** (0.01)	0.173*** (0.015)		0.115*** (0.01)	0.106*** (0.012)	-0.060*** (0.011)	-0.063*** (0.012)	
Love		0.176*** (0.008)	0.174*** (0.011)		0.082*** (0.009)	0.079*** (0.009)		0.093*** (0.01)	0.090*** (0.012)	-0.025* (0.011)	-0.025* (0.011)	
Relief		0.057*** (0.008)	0.060*** (0.009)		0.001 (0.009)	0.001 (0.01)		0.040*** (0.009)	0.038** (0.014)	-0.052*** (0.01)	-0.048*** (0.011)	
Sensory Pleasure		0.047*** (0.007)	0.043*** (0.008)		0.047*** (0.009)	0.046*** (0.009)		0.039*** (0.009)	0.040*** (0.01)	-0.043*** (0.01)	-0.045*** (0.01)	
Anger		-0.022* (0.009)	-0.024** (0.009)		-0.003 (0.01)	-0.008 (0.011)		-0.026* (0.011)	-0.026* (0.011)	0.114*** (0.011)	0.119*** (0.012)	
Anxiety		-0.077*** (0.01)	-0.079*** (0.013)		-0.043*** (0.011)	-0.043*** (0.012)		-0.121*** (0.012)	-0.122*** (0.014)	0.288*** (0.013)	0.288*** (0.019)	
Boredom		-0.033*** (0.008)	-0.031* (0.012)		-0.008 (0.009)	-0.004 (0.012)		0.032** (0.01)	0.034** (0.012)	0.049*** (0.01)	0.053*** (0.015)	
Confusion		-0.007 (0.009)	-0.007 (0.009)		-0.047*** (0.01)	-0.042*** (0.012)		-0.035*** (0.01)	-0.032** (0.011)	0.118*** (0.011)	0.109*** (0.013)	
Disgust		-0.001 (0.008)	-0.003 (0.009)		0.025** (0.009)	0.023* (0.009)		-0.024* (0.01)	-0.024* (0.01)	0.025* (0.01)	0.028** (0.011)	
Fear		0.023* (0.009)	0.021 (0.013)		-0.081*** (0.011)	-0.081*** (0.015)		-0.029** (0.011)	-0.029* (0.012)	0.052*** (0.012)	0.052*** (0.015)	
Frustration		-0.111*** (0.01)	-0.108*** (0.012)		-0.038*** (0.011)	-0.033** (0.012)		-0.061*** (0.012)	-0.064*** (0.018)	0.263*** (0.013)	0.261*** (0.021)	
Loneliness		-0.128*** (0.009)	-0.128*** (0.011)		-0.028** (0.01)	-0.029* (0.012)		-0.141*** (0.01)	-0.138*** (0.013)	0.147*** (0.011)	0.145*** (0.014)	
Regret		-0.132*** (0.008)	-0.128*** (0.012)		-0.098*** (0.009)	-0.097*** (0.013)		-0.076*** (0.01)	-0.073*** (0.011)	0.077*** (0.01)	0.064*** (0.015)	
Sadness		-0.104*** (0.01)	-0.103*** (0.013)		-0.049*** (0.011)	-0.052*** (0.014)		-0.124*** (0.011)	-0.120*** (0.013)	0.176*** (0.012)	0.183*** (0.016)	
Intercept	3.837*** (0.04)	3.837*** (0.025)	3.830*** (0.022)	4.037*** (0.037)	4.040*** (0.026)	4.037*** (0.025)	4.316*** (0.048)	4.341*** (0.039)	4.335*** (0.038)	2.785*** (0.047)	2.703*** (0.041)	2.699*** (0.039)
Observations	20,929	20,520	20,520	20,924	20,516	20,516	20,906	20,501	20,501	20,859	20,465	20,465
Log Likelihood	-34,002.80	-27,862.28	-27,760.19	-34,469.41	-30,475.29	-30,382.48	-34,994.96	-31,304.33	-31,210.45	-39,216.08	-32,896.91	-32,806.16
Akaike Inf. Crit.	68,019.61	55,778.55	55,614.39	68,952.81	61,004.58	60,858.95	70,003.93	62,662.65	62,514.89	78,446.15	65,847.82	65,706.32
Bayesian Inf. Crit.	68,075.25	55,992.61	55,987.00	69,008.45	61,218.63	61,231.56	70,059.56	62,876.68	62,887.46	78,501.77	66,061.80	66,078.81

Note: * p < 0.05; ** p < 0.01; *** p < 0.001

Table S7. Multilevel modelling with Level 1 predictors

Level 1 variables were grand-mean standardized. Only predictors were standardized. Coefficients can be interpreted as the amount of change in the wellbeing outcome (raw score) for every one-unit change of the predictor.

1. F refers to models with fixed effects and random intercepts of countries
2. R refers to models with fixed effects and independent random slopes of 20 emotions

	Wellness	Resilience	Health	Distress
Age	0.009 (0.008)	0.033*** (0.009)	0.049*** (0.009)	-0.084*** (0.01)
Gender	0.094*** (0.015)	0.117*** (0.017)	0.067*** (0.018)	-0.054** (0.019)
Education	0.007 (0.007)	0.017* (0.008)	0.007 (0.008)	0.044*** (0.009)
SES	0.214*** (0.007)	0.125*** (0.008)	0.136*** (0.008)	-0.057*** (0.009)
Empathic Concern	0.069*** (0.009)	0.084*** (0.01)	0.064*** (0.01)	-0.002 (0.011)
Personal Distress	0.008 (0.009)	-0.058*** (0.01)	-0.050*** (0.011)	0.088*** (0.011)
Prosociality (COVID related)	0.013 (0.007)	0.032*** (0.008)	0.018* (0.009)	-0.005 (0.01)
Prosociality (Non COVID-19 related)	0.027*** (0.007)	0.032*** (0.008)	-0.031*** (0.009)	-0.005 (0.009)
ER-rumination	-0.127*** (0.009)	-0.104*** (0.01)	-0.128*** (0.011)	0.212*** (0.012)
ER-reappraisal	0.044*** (0.008)	0.106*** (0.009)	0.038*** (0.009)	-0.049*** (0.01)
ER-suppression	-0.044*** (0.008)	-0.003 (0.009)	-0.030** (0.009)	0.067*** (0.01)
ER-social sharing	0.050*** (0.007)	0.004 (0.008)	0.039*** (0.009)	-0.009 (0.01)
ER-distraction	-0.006 (0.008)	0.029*** (0.009)	-0.014 (0.009)	0.056*** (0.01)
ER-acceptance	0.127*** (0.007)	0.170*** (0.008)	0.093*** (0.008)	-0.043*** (0.009)
Self vulnerable	-0.021* (0.008)	-0.012 (0.009)	-0.065*** (0.01)	0.060*** (0.011)
Country vulnerable	0.008 (0.009)	0.013 (0.01)	0.008 (0.01)	0.032** (0.011)
Employment	0.168*** (0.022)	0.042 (0.025)	0.151*** (0.026)	0.067* (0.028)
Covidsymptom	-0.070*** (0.019)	-0.008 (0.021)	-0.325*** (0.022)	0.130*** (0.024)
Admiration	0.011 (0.012)	-0.01 (0.01)	0.011 (0.011)	-0.028* (0.012)
Calm	0.105*** (0.011)	0.097*** (0.012)	0.132*** (0.012)	-0.146*** (0.015)
Compassion	-0.002 (0.01)	0.029* (0.012)	0.015 (0.011)	0.004 (0.012)
Determination	0.176*** (0.01)	0.249*** (0.012)	0.116*** (0.013)	-0.040*** (0.012)
Moved	0.008 (0.009)	-0.002 (0.011)	-0.01 (0.011)	-0.006 (0.012)
Gratitude	0.067*** (0.009)	0.048*** (0.011)	0.02 (0.01)	-0.025* (0.011)
Hope	0.182*** (0.013)	0.157*** (0.015)	0.097*** (0.012)	-0.060*** (0.011)
Love	0.156*** (0.01)	0.071*** (0.009)	0.080*** (0.012)	-0.015 (0.011)
Relief	0.061*** (0.008)	-0.001 (0.01)	0.037** (0.013)	-0.046*** (0.01)
Sensory Pleasure	0.036*** (0.007)	0.034*** (0.009)	0.035*** (0.01)	-0.049*** (0.01)
Anger	-0.015 (0.009)	-0.004 (0.011)	-0.014 (0.011)	0.104*** (0.012)
Anxiety	-0.057*** (0.012)	-0.041*** (0.011)	-0.089*** (0.013)	0.222*** (0.019)
Boredom	-0.022 (0.012)	0.008 (0.012)	0.040*** (0.011)	0.041** (0.014)
Confusion	-0.003 (0.009)	-0.038** (0.012)	-0.026* (0.011)	0.095*** (0.013)
Disgust	-0.004 (0.009)	0.020* (0.009)	-0.022* (0.01)	0.025* (0.011)
Fear	0.024* (0.012)	-0.066*** (0.015)	-0.004 (0.012)	0.002 (0.015)
Frustration	-0.098*** (0.012)	-0.033** (0.012)	-0.052** (0.017)	0.230*** (0.021)
Loneliness	-0.118*** (0.01)	-0.029** (0.011)	-0.128*** (0.013)	0.128*** (0.013)
Regret	-0.114*** (0.011)	-0.083*** (0.012)	-0.049*** (0.01)	0.035* (0.014)
Sadness	-0.095*** (0.013)	-0.053*** (0.014)	-0.106*** (0.013)	0.156*** (0.015)
Intercept	3.689*** (0.029)	3.994*** (0.033)	4.256*** (0.044)	2.607*** (0.048)
Observations	20,026	20,022	20,009	19,978
Log Likelihood	-26,677.69	-29,237.42	-30,129.40	-31,640.79
Akaike Inf. Crit.	53,477.39	58,596.85	60,380.81	63,403.57
Bayesian Inf. Crit.	53,959.46	59,078.91	60,862.83	63,885.50

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table S8. Multilevel modelling with Level 1 predictors and extra control variables

Level 1 variables were grand-mean standardized. Only predictors were standardized. Coefficients can be interpreted as the amount of change in the wellbeing outcome (raw score) for every one-unit change of the predictor.

All models included independent random slopes for the 20 emotions

	Wellness		Resilience		Health		Distress	
	F ¹	R ²	F	R	F	R	F	R
Age	0.023** (0.008)	0.023** (0.008)	0.037*** (0.009)	0.040*** (0.009)	0.049*** (0.01)	0.049*** (0.01)	-0.104*** (0.01)	-0.102*** (0.011)
Gender (M)	0.071*** (0.016)	0.071*** (0.016)	0.104*** (0.018)	0.101*** (0.018)	0.047* (0.019)	0.048* (0.019)	-0.088*** (0.021)	-0.084*** (0.02)
Education	0.022** (0.008)	0.023** (0.008)	0.034*** (0.009)	0.034*** (0.009)	0.015 (0.009)	0.016 (0.009)	0.039*** (0.01)	0.040*** (0.01)
Subjective SES	0.235*** (0.007)	0.231*** (0.007)	0.140*** (0.008)	0.137*** (0.008)	0.161*** (0.009)	0.159*** (0.009)	-0.057*** (0.01)	-0.056*** (0.01)
Admiration	0.018* (0.009)	0.023 (0.013)	0.007 (0.01)	0.005 (0.011)	0.019 (0.01)	0.015 (0.013)	-0.034** (0.011)	-0.029* (0.012)
Calm	0.136*** (0.009)	0.131*** (0.011)	0.130*** (0.01)	0.130*** (0.013)	0.148*** (0.01)	0.155*** (0.013)	-0.170*** (0.011)	-0.167*** (0.015)
Compassion	0.024** (0.009)	0.023* (0.011)	0.063*** (0.01)	0.061*** (0.012)	0.025* (0.01)	0.024* (0.012)	0.01 (0.011)	0.016 (0.013)
Determination	0.193*** (0.009)	0.190*** (0.011)	0.282*** (0.01)	0.278*** (0.012)	0.120*** (0.01)	0.131*** (0.013)	-0.046*** (0.011)	-0.044*** (0.012)
Moved	0.007 (0.009)	0.016 (0.01)	0.003 (0.01)	0.008 (0.012)	-0.018 (0.01)	-0.01 (0.012)	0.008 (0.011)	0.008 (0.013)
Gratitude	0.086*** (0.009)	0.084*** (0.011)	0.076*** (0.01)	0.071*** (0.012)	0.024* (0.011)	0.025* (0.011)	-0.015 (0.012)	-0.017 (0.012)
Hope	0.188*** (0.009)	0.187*** (0.014)	0.174*** (0.01)	0.171*** (0.015)	0.116*** (0.011)	0.106*** (0.013)	-0.064*** (0.012)	-0.067*** (0.012)
Love	0.176*** (0.009)	0.173*** (0.011)	0.078*** (0.01)	0.076*** (0.01)	0.093*** (0.01)	0.091*** (0.011)	-0.022* (0.011)	-0.021 (0.011)
Relief	0.057*** (0.008)	0.060*** (0.009)	0.005 (0.009)	0.005 (0.01)	0.037*** (0.009)	0.033* (0.015)	-0.055*** (0.01)	-0.051*** (0.011)
Sensory Pleasure	0.049*** (0.008)	0.045*** (0.009)	0.046*** (0.009)	0.045*** (0.01)	0.040*** (0.009)	0.042*** (0.011)	-0.048*** (0.01)	-0.051*** (0.011)
Anger	-0.023* (0.009)	-0.024** (0.009)	-0.009 (0.011)	-0.012 (0.012)	-0.025* (0.011)	-0.024 (0.013)	0.112*** (0.012)	0.116*** (0.013)
Anxiety	-0.079*** (0.011)	-0.081*** (0.014)	-0.038** (0.012)	-0.037** (0.013)	-0.123*** (0.012)	-0.124*** (0.015)	0.283*** (0.014)	0.286*** (0.021)
Boredom	-0.031*** (0.009)	-0.032* (0.013)	-0.004 (0.01)	-0.003 (0.013)	0.026* (0.01)	0.025* (0.013)	0.055*** (0.011)	0.056*** (0.016)
Confusion	-0.011 (0.009)	-0.01 (0.009)	-0.049*** (0.01)	-0.042** (0.013)	-0.040*** (0.011)	-0.038*** (0.011)	0.125*** (0.012)	0.116*** (0.014)
Disgust	0.0004 (0.009)	-0.002 (0.01)	0.028** (0.01)	0.025** (0.01)	-0.017 (0.01)	-0.017 (0.01)	0.024* (0.011)	0.028* (0.012)
Fear	0.021* (0.01)	0.018 (0.014)	-0.083*** (0.011)	-0.085*** (0.015)	-0.025* (0.012)	-0.025* (0.013)	0.044*** (0.013)	0.044** (0.015)
Frustration	-0.114*** (0.01)	-0.110*** (0.012)	-0.045*** (0.012)	-0.039*** (0.012)	-0.060*** (0.012)	-0.063*** (0.018)	0.266*** (0.013)	0.259*** (0.023)
Loneliness	-0.126*** (0.009)	-0.124*** (0.012)	-0.025* (0.01)	-0.024 (0.013)	-0.142*** (0.011)	-0.139*** (0.013)	0.146*** (0.012)	0.144*** (0.015)
Regret	-0.136*** (0.009)	-0.129*** (0.013)	-0.103*** (0.01)	-0.098*** (0.012)	-0.081*** (0.01)	-0.076*** (0.01)	0.084*** (0.011)	0.068*** (0.016)
Sadness	-0.098*** (0.01)	-0.100*** (0.014)	-0.048*** (0.012)	-0.053*** (0.015)	-0.120*** (0.012)	-0.115*** (0.014)	0.179*** (0.013)	0.189*** (0.017)
<i>GDP</i>	-0.078 (0.042)	-0.059 (0.038)	0.004 (0.047)	0.022 (0.045)	-0.065 (0.071)	-0.075 (0.07)	0.082 (0.058)	0.084 (0.056)
<i>Gini Index</i>	-0.022 (0.027)	-0.006 (0.025)	0.044 (0.03)	0.055 (0.03)	-0.021 (0.047)	-0.017 (0.045)	0.031 (0.038)	0.029 (0.037)
<i>Death per Million (Logged)</i>	-0.007 (0.032)	-0.013 (0.029)	-0.002 (0.036)	-0.006 (0.035)	0.037 (0.054)	0.044 (0.053)	0.006 (0.045)	0.006 (0.043)
<i>Stringency</i>	0.038 (0.027)	0.029 (0.025)	0.065* (0.03)	0.06 (0.03)	0.003 (0.047)	-0.004 (0.046)	-0.127** (0.038)	-0.110** (0.037)
Intercept	3.850*** (0.025)	3.845*** (0.023)	4.055*** (0.028)	4.055*** (0.027)	4.357*** (0.042)	4.349*** (0.041)	2.706*** (0.035)	2.702*** (0.033)
Observations	18,417	18,417	18,413	18,413	18,400	18,400	18,366	18,366
Log Likelihood	-25,012.42	-24,914.54	-27,301.01	-27,215.48	-28,046.57	-27,956.41	-29,580.12	-29,493.92
Akaike Inf. Crit.	50,086.84	49,931.08	54,664.01	54,532.96	56,155.14	56,014.82	59,222.25	59,089.84
Bayesian Inf. Crit	50,329.240	50,329.87	54,906.41	54,931.75	56,397.51	56,413.57	59,464.56	59,488.49

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table S9. Multilevel models with country-level predictors

Variables in italic font are country-level variables (Level 2). Level 2 variables were standardized at the country level before being entered into the model. Level 1 variables were grand-mean standardized. Only predictors were standardized.

Coefficients can be interpreted as the amount of change in the wellbeing outcome (raw score) for every one-unit change of the predictor.

1. F refers to models with fixed effects and random intercepts of countries
2. R refers to models with fixed effects and independent random slopes of 20 emotions

	Wellbeing				Resilience				Health				Distress			
	T ^a	IND ^b	ING-C ^c	INS-C ^d	T	IND	ING-C	INS-C	T	IND	ING-C	INS-C	T	IND	ING-C	INS-C
Age	0.003 (0.012)	0.023*** (0.008)	0.032** (0.01)	0.033** (0.01)	0.018 (0.014)	0.036*** (0.009)	0.029* (0.011)	0.029** (0.011)	0.044** (0.014)	0.058*** (0.009)	0.031** (0.012)	0.032** (0.012)	-0.103*** (0.016)	-0.105*** (0.010)	-0.114*** (0.013)	-0.114*** (0.013)
Gender	0.095*** (0.024)	0.083*** (0.016)	0.115*** (0.02)	0.115*** (0.02)	0.089** (0.028)	0.084*** (0.018)	0.110*** (0.023)	0.109*** (0.023)	0.083** (0.029)	0.040* (0.019)	0.088*** (0.024)	0.088*** (0.024)	-0.106*** (0.032)	-0.057** (0.020)	-0.075** (0.027)	-0.075** (0.027)
Education	0.026* (0.011)	0.024** (0.008)	0.035*** (0.009)	0.035*** (0.009)	0.017 (0.013)	0.039*** (0.009)	0.034** (0.011)	0.034** (0.011)	0.032* (0.013)	0.009 (0.009)	0.031** (0.011)	0.031** (0.011)	0.023 (0.015)	0.032*** (0.010)	0.02 (0.012)	0.02 (0.012)
SES	0.200*** (0.011)	0.227*** (0.008)	0.205*** (0.009)	0.205*** (0.009)	0.118*** (0.013)	0.131*** (0.009)	0.117*** (0.011)	0.117*** (0.011)	0.152*** (0.013)	0.157*** (0.009)	0.134*** (0.011)	0.135*** (0.011)	-0.044** (0.015)	-0.062*** (0.010)	-0.061*** (0.013)	-0.061*** (0.013)
Admiration	-0.003 (0.013)	0.017 (0.011)	-0.002 (0.011)	-0.001 (0.011)	-0.003 (0.015)	0.002 (0.012)	0.007 (0.015)	0.008 (0.015)	0.001 (0.017)	0.014 (0.013)	0.022 (0.014)	0.022 (0.014)	-0.035* (0.017)	-0.033** (0.012)	-0.022 (0.015)	-0.023 (0.015)
Calm	0.112*** (0.015)	0.136*** (0.011)	0.134*** (0.011)	0.134*** (0.011)	0.117*** (0.02)	0.141*** (0.012)	0.134*** (0.015)	0.134*** (0.015)	0.165*** (0.018)	0.160*** (0.013)	0.150*** (0.019)	0.150*** (0.02)	-0.168*** (0.025)	-0.179*** (0.014)	-0.146*** (0.021)	-0.146*** (0.021)
Compassion	-0.006 (0.013)	0.014 (0.011)	0.014 (0.012)	0.014 (0.012)	0.049** (0.015)	0.050** (0.012)	0.048** (0.015)	0.047** (0.015)	0.018 (0.02)	0.027* (0.011)	0.036* (0.014)	0.036* (0.014)	0.017 (0.02)	0.031* (0.015)	0.012 (0.018)	0.012 (0.018)
Determination	0.195*** (0.015)	0.197*** (0.011)	0.192*** (0.013)	0.192*** (0.013)	0.284*** (0.017)	0.287*** (0.013)	0.276*** (0.016)	0.275*** (0.016)	0.148*** (0.015)	0.137*** (0.014)	0.133*** (0.013)	0.133*** (0.013)	-0.038* (0.017)	-0.057** (0.013)	-0.04 (0.021)	-0.04 (0.021)
Moved	0.036* (0.015)	0.022* (0.011)	0.017 (0.013)	0.017 (0.013)	0.015 (0.018)	0.016 (0.012)	0.018 (0.016)	0.017 (0.016)	0.003 (0.018)	0.000 (0.013)	-0.009 (0.015)	-0.009 (0.015)	0.02 (0.017)	0.003 (0.014)	0.024 (0.015)	0.024 (0.015)
Gratitude	0.091*** (0.016)	0.080*** (0.010)	0.103*** (0.013)	0.103*** (0.013)	0.056** (0.017)	0.066*** (0.013)	0.074*** (0.015)	0.074*** (0.015)	0.022 (0.019)	0.024* (0.011)	0.021 (0.017)	0.021 (0.017)	-0.016 (0.018)	-0.032** (0.012)	-0.024 (0.016)	-0.024 (0.016)
Hope	0.231*** (0.024)	0.187*** (0.013)	0.200*** (0.014)	0.199*** (0.014)	0.184*** (0.02)	0.160*** (0.014)	0.174*** (0.02)	0.174*** (0.02)	0.109*** (0.013)	0.108*** (0.018)	0.106*** (0.019)	0.105*** (0.018)	-0.066*** (0.019)	-0.057*** (0.013)	-0.079*** (0.017)	-0.079*** (0.017)
Love	0.163*** (0.016)	0.180*** (0.011)	0.167*** (0.013)	0.167*** (0.013)	0.083*** (0.015)	0.078*** (0.010)	0.074*** (0.013)	0.074*** (0.013)	0.088*** (0.017)	0.074*** (0.013)	0.083*** (0.016)	0.083*** (0.016)	-0.014 (0.017)	-0.017 (0.012)	-0.023 (0.016)	-0.023 (0.016)
Relief	0.066*** (0.013)	0.058*** (0.009)	0.055*** (0.012)	0.055*** (0.012)	-0.002 (0.015)	0.003 (0.011)	0.001 (0.012)	0.001 (0.012)	0.01 (0.017)	0.024* (0.010)	0.018 (0.013)	0.017 (0.012)	-0.064*** (0.016)	-0.052*** (0.011)	-0.058*** (0.014)	-0.058*** (0.014)
Pleasure	0.042*** (0.012)	0.046*** (0.009)	0.040** (0.013)	0.040** (0.014)	0.044** (0.016)	0.040*** (0.010)	0.034** (0.013)	0.034** (0.013)	0.040* (0.017)	0.049*** (0.011)	0.053*** (0.013)	0.053*** (0.013)	-0.062*** (0.016)	-0.046*** (0.011)	-0.060*** (0.015)	-0.060*** (0.015)
Anger	-0.027 (0.016)	-0.021* (0.010)	-0.033* (0.013)	-0.032* (0.013)	-0.021 (0.016)	-0.017 (0.013)	-0.025 (0.014)	-0.025 (0.014)	-0.012 (0.018)	-0.017 (0.012)	-0.039* (0.017)	-0.039* (0.016)	0.153*** (0.018)	0.117*** (0.014)	0.125*** (0.018)	0.125*** (0.018)
Anxiety	-0.099*** (0.025)	-0.076*** (0.013)	-0.077*** (0.018)	-0.076*** (0.018)	-0.044* (0.018)	-0.041* (0.012)	-0.029 (0.015)	-0.027 (0.015)	-0.136*** (0.021)	-0.126*** (0.015)	-0.134*** (0.022)	-0.134*** (0.022)	0.322*** (0.031)	0.301*** (0.019)	0.295*** (0.03)	0.295*** (0.03)
Boredom	-0.029 (0.019)	-0.037* (0.013)	-0.047*** (0.013)	-0.047*** (0.013)	-0.034 (0.021)	-0.005 (0.012)	-0.030* (0.013)	-0.030* (0.013)	0.03 (0.018)	0.036*** (0.013)	0.037* (0.017)	0.037* (0.017)	0.069*** (0.02)	0.057*** (0.015)	0.041** (0.015)	0.041** (0.015)
Confusion	-0.01 (0.014)	-0.000 (0.010)	-0.002 (0.013)	-0.002 (0.013)	-0.036 (0.021)	-0.035** (0.013)	-0.028 (0.018)	-0.028 (0.018)	-0.015 (0.016)	-0.030* (0.013)	-0.004 (0.014)	-0.004 (0.014)	0.108*** (0.021)	0.106*** (0.015)	0.103*** (0.02)	0.103*** (0.02)
Disgust	-0.002 (0.014)	-0.004 (0.009)	-0.006 (0.011)	-0.006 (0.011)	0.002 (0.015)	0.029** (0.010)	0.017 (0.013)	0.017 (0.013)	-0.022 (0.016)	-0.025* (0.010)	-0.01 (0.017)	-0.011 (0.018)	0.001 (0.018)	0.026* (0.012)	0.029 (0.017)	0.029 (0.017)
Fear	0.003 (0.023)	0.026 (0.014)	0.013 (0.019)	0.013 (0.019)	-0.113*** (0.021)	-0.079*** (0.014)	-0.098*** (0.021)	-0.098*** (0.021)	-0.058** (0.019)	-0.024 (0.014)	-0.047** (0.018)	-0.047** (0.018)	0.060** (0.023)	0.029* (0.013)	0.035 (0.019)	0.035 (0.019)
Frustration	-0.106*** (0.016)	-0.107*** (0.012)	-0.112*** (0.015)	-0.113*** (0.015)	-0.01 (0.021)	-0.023 (0.013)	-0.027 (0.018)	-0.026 (0.018)	-0.055 (0.03)	-0.066*** (0.018)	-0.069** (0.025)	-0.067** (0.025)	0.220*** (0.027)	0.265*** (0.022)	0.281*** (0.032)	0.281*** (0.032)
Loneliness	-0.125*** (0.019)	-0.121*** (0.011)	-0.110*** (0.015)	-0.110*** (0.015)	-0.017 (0.02)	-0.032* (0.013)	-0.016 (0.017)	-0.016 (0.017)	-0.131*** (0.019)	-0.138*** (0.013)	-0.129*** (0.018)	-0.129*** (0.018)	0.129*** (0.02)	0.154*** (0.015)	0.150*** (0.018)	0.150*** (0.018)
Regret	-0.122*** (0.018)	-0.141*** (0.014)	-0.136*** (0.015)	-0.136*** (0.015)	-0.095*** (0.017)	-0.105*** (0.013)	-0.113*** (0.014)	-0.113*** (0.014)	-0.088*** (0.016)	-0.084*** (0.011)	-0.104*** (0.013)	-0.104*** (0.013)	0.099*** (0.019)	0.063*** (0.016)	0.098*** (0.016)	0.098*** (0.016)
Sadness	-0.123*** (0.02)	-0.118*** (0.014)	-0.104*** (0.019)	-0.104*** (0.019)	-0.067** (0.023)	-0.056*** (0.015)	-0.060** (0.02)	-0.060** (0.02)	-0.135*** (0.018)	-0.123*** (0.014)	-0.102*** (0.02)	-0.102*** (0.02)	0.169*** (0.022)	0.180*** (0.018)	0.135*** (0.022)	0.135*** (0.022)

Tightness	-0.008 (0.034)				-0.066 (0.035)				-0.067 (0.053)				-0.073 (0.052)			
Individualism		-0.054* (0.023)				-0.016 (0.029)				-0.017 (0.029)				0.022 (0.039)		
Ingroup.Collectivism			0.041 (0.033)				0.014 (0.033)				-0.022 (0.048)				-0.009 (0.058)	
Institutional.Collectivism				-0.05 (0.033)				-0.066* (0.031)				-0.088 (0.045)				0.013 (0.059)
Intercept	3.843*** (0.034)	3.815*** (0.023)	3.822*** (0.033)	3.822*** (0.032)	4.092*** (0.035)	4.045*** (0.029)	4.065*** (0.033)	4.066*** (0.03)	4.343*** (0.053)	4.373*** (0.030)	4.339*** (0.048)	4.341*** (0.045)	2.796*** (0.052)	2.782*** (0.05)	2.802*** (0.058)	2.802*** (0.058)
Observations	7,665	17,502	10,632	10,632	7,664	17,499	10,630	10,630	7,657	17,489	10,618	10,618	7,644	17,462	10,595	10,595
Log Likelihood	-10,281.13	-23,427.20	-14,079.10	-14,078.72	-11,269.88	-25,622.04	-15,375.89	-15,373.85	-11,557.94	-26,363.64	-15,844.08	-15,842.42	-12,204.61	-27,686.99	-17,007.34	-17,007.32
Akaike Inf. Crit.	20,658.26	46,950.39	28,254.20	28,253.44	22,635.76	51,340.08	30,847.78	30,843.70	23,211.88	52,823.28	31,784.16	31,780.84	24,505.21	55,469.98	34,110.68	34,110.63
Bayesian Inf. Crit.	20,991.43	47,323.29	28,603.12	28,602.35	22,968.93	51,712.96	31,196.69	31,192.61	23,544.99	53,196.14	32,133.02	32,129.70	24,838.25	55,842.76	34,459.43	34,459.39

Note: * p<0.05; ** p<0.01; *** p<0.001

- Model with tightness as cultural variable
- Model with Individualism as cultural variable
- Model with Ingroup Collectivism as cultural variable
- Model with Institutional Collectivism as cultural variable

Table S10. Multilevel analysis with Level-2 cultural variable predictors

Fixed-effect approach for the 51-country dataset

In the mixed-effect models, we could only allow independent random slopes for the 20 emotions due to model complexity. We therefore applied, for each wellbeing facet, a fixed-effect model using multiple regression in order to verify the findings using multilevel analysis and to test the extent to which emotion-wellbeing relationships were consistent across countries (Möhring, 2012). All individual-level predictors were standardized before being entered into the models.

Following the procedure applied in previous research (Möhring, 2012), we dummy-coded countries, thus creating 50 country dummy codes (note: there were 51 countries included in the analysis, therefore 50 country dummy codes). For each wellbeing outcome, we added age, gender, education, and subjective SES as control variables; all 20 emotions, 50 country dummy variables, and emotion x country interaction terms were added as predictors. The slope of emotions represents the relationship between emotion and wellbeing for the reference group; the slope of emotion x country interaction represents the difference between country A and the reference group in terms of slopes. We used the `glht` function in the “multcomp” R package (Hothorn et al., 2016) to calculate the coefficient vector, obtained standard errors using the Delta method, and calculated the 95% confidence intervals. For each emotion-wellbeing relationship (e.g., admiration – wellness), we averaged the standard coefficient for all 51 countries to get the overall emotion-wellbeing estimate. The emotion-wellbeing relationships established using the fixed approach were highly consistent with the results from the multilevel regressions. The overall results are reported in Table S11; cultural consistency is summarized in Table S12.

We also report the number of countries with emotion-wellbeing coefficients (point estimates) above or below zero (Table S12, Panel A), and the number of countries with emotion-wellbeing relationship confidence intervals below zero, across zero, or above zero (Table S12, Panel B). The results demonstrate that the findings were consistent across countries. Both the coefficients and confidence intervals show that across the 51 countries, the relationships between individual emotions and wellbeing facets were generally consistent. The coefficient estimates suggest that relationships between the emotions calm, hope, and sadness and wellbeing were the most consistent across countries (for all four wellbeing outcomes). Determination, loneliness, love, and regret were consistently associated with wellbeing across countries for three out of the four wellbeing outcomes.

Emotion	Wellness	Resilience	Health	Distress
Admiration	0.018 [-0.001, 0.038]	0.004 [-0.018, 0.027]	0.008 [-0.015, 0.032]	-0.019 [-0.044, 0.007]
Calm	0.123 [0.101, 0.143]	0.118 [0.095, 0.141]	0.159 [0.135, 0.183]	-0.154 [-0.180, -0.128]
Compassion	0.021 [0.001, 0.041]	0.066 [0.043, 0.089]	0.036 [0.012, 0.059]	0.012 [-0.014, 0.038]
Determination	0.186 [0.166, 0.205]	0.274 [0.252, 0.297]	0.141 [0.118, 0.165]	-0.048 [-0.073, -0.023]
Gratitude	0.084 [0.063, 0.105]	0.052 [0.028, 0.076]	0.009 [-0.154, 0.034]	-0.012 [-0.039, 0.015]
Hope	0.204 [0.182, 0.225]	0.179 [0.155, 0.203]	0.098 [0.073, 0.123]	-0.065 [-0.092, -0.037]
Love	0.172 [0.151, 0.192]	0.083 [0.060, 0.107]	0.084 [0.059, 0.108]	-0.027 [-0.053, -0.001]
Moved	0.026 [0.006, 0.047]	0.015 [-0.008, 0.038]	0.000 [-0.025, 0.024]	0.006 [-0.020, 0.033]
Pleasure	0.031 [0.013, 0.048]	0.045 [0.024, 0.065]	0.033 [0.012, 0.054]	-0.042 [-0.065, -0.019]
Relief	0.064 [0.045, 0.083]	0.013 [-0.009, 0.034]	0.044 [0.021, 0.066]	-0.038 [-0.063, -0.014]
Anger	-0.024 [-0.045, -0.002]	-0.018 [-0.043, 0.007]	-0.040 [-0.065, -0.014]	0.131 [0.103, 0.159]
Anxiety	-0.076 [-0.010, -0.051]	-0.034 [-0.062, -0.006]	-0.112 [-0.141, -0.083]	0.275 [0.244, 0.307]
Boredom	-0.026 [-0.046, -0.006]	0.002 [-0.022, 0.025]	0.034 [0.009, 0.058]	0.058 [0.032, 0.084]
Confusion	-0.010 [-0.031, 0.012]	-0.039 [-0.063, -0.015]	-0.029 [-0.054, -0.004]	0.098 [0.070, 0.125]
Disgust	-0.005 [-0.025, 0.015]	0.019 [-0.004, 0.042]	-0.022 [-0.048, 0.002]	0.029 [0.003, 0.055]
Fear	0.018 [-0.004, 0.040]	-0.089 [-0.114, -0.063]	-0.030 [-0.056, -0.003]	0.055 [0.027, 0.084]
Frustration	-0.106 [-0.131, -0.082]	-0.023 [-0.051, 0.005]	-0.060 [-0.089, -0.031]	0.268 [0.236, 0.300]
Loneliness	-0.131 [-0.153, -0.110]	-0.029 [-0.053, -0.004]	-0.130 [-0.156, -0.104]	0.140 [0.113, 0.168]
Regret	-0.126 [-0.131, -0.082]	-0.091 [-0.113, -0.068]	-0.073 [-0.097, -0.050]	0.051 [0.026, 0.077]
Sadness	-0.097 [-0.120, -0.073]	-0.062 [-0.089, -0.035]	-0.121 [-0.149, -0.093]	0.189 [0.159, 0.220]

Table S11. Standardized coefficients with 95% confidence intervals in square brackets for the emotion – wellbeing relationship in fixed effect regression models

Standardized coefficients were calculated by averaging 51 countries' emotion – wellbeing standardized coefficients; and the associated Wald type CI was obtained using the function “glht” in the R package “multcomp”

Note: only predictors were standardized, outcome variables were not standardized.

A									
Emotion	Wellness		Resilience		Health		Distress		
	$\beta < 0$	$\beta > 0$	$\beta < 0$	$\beta > 0$	$\beta < 0$	$\beta > 0$	$\beta < 0$	$\beta > 0$	
Admiration	25	26	29	22	20	31	31	20	
Calm	6	45	5	46	0	51	44	7	
Compassion	20	31	9	42	15	36	25	26	
Determination	1	50	0	51	4	47	38	13	
Gratitude	5	46	13	38	24	27	26	25	
Hope	2	49	1	50	8	43	34	17	
Love	1	50	8	43	8	43	34	17	
Moved	17	34	21	30	26	25	23	28	
Pleasure	14	37	15	36	19	32	33	18	
Relief	9	42	22	29	19	32	37	14	
Anger	31	20	27	24	32	19	6	45	
Anxiety	40	11	34	17	43	8	2	49	
Boredom	33	18	21	30	17	34	15	36	
Confusion	26	25	33	18	35	16	12	39	
Disgust	21	30	17	34	30	21	20	31	
Fear	20	31	39	12	27	24	19	32	
Frustration	45	6	33	18	36	15	2	49	
Loneliness	48	3	32	19	47	4	4	47	
Regret	46	5	44	7	39	12	16	35	
Sadness	44	7	36	15	45	6	3	48	

B												
Emotion	Wellness			Resilience			Health			Distress		
	CI < 0	CI cross 0	CI > 0	CI < 0	CI cross 0	CI > 0	CI < 0	CI cross 0	CI > 0	CI < 0	CI cross 0	CI > 0
Admiration	1	43	7	0	49	2	2	48	1	4	46	1
Calm	0	29	22	0	30	21	0	27	24	26	25	0
Compassion	0	45	6	0	45	6	2	42	7	1	48	2
<u>Determination</u>	0	15	36	0	7	44	0	30	21	6	44	1
Gratitude	0	40	11	0	42	9	0	47	4	2	49	0
Hope	0	17	34	0	22	29	0	37	14	7	44	0
Love	0	18	33	0	42	9	0	38	13	1	49	1
Moved	2	44	5	3	45	3	4	45	2	3	47	1
Pleasure	1	44	6	0	46	5	0	45	6	5	46	0
Relief	0	43	8	0	50	1	1	44	6	3	47	1
Anger	1	49	1	3	46	2	4	46	1	0	35	16
Anxiety	11	39	1	4	46	1	13	38	0	0	18	33
Boredom	7	42	2	2	47	2	0	46	5	1	43	7
Confusion	1	50	0	6	45	0	5	46	0	0	36	15
Disgust	4	45	2	1	48	2	3	46	2	0	49	2
Fear	2	45	4	11	39	1	5	46	0	0	42	9
Frustration	17	34	0	3	47	1	7	42	2	0	16	35
<u>Loneliness</u>	25	26	0	5	44	2	20	31	0	0	30	21
<u>Regret</u>	26	25	0	13	38	0	10	41	0	1	40	10
Sadness	15	36	0	5	46	0	14	37	0	0	26	25

Table S12. Cultural consistency summary for the emotion-wellbeing relationship using fixed-effect regression models

Panel A. Number of countries with emotion-wellbeing coefficients (point estimates) above or below zero. Panel B. Number of countries with emotion-wellbeing relationship confidence intervals below zero, across zero, or above zero

For all four wellbeing outcomes, calm, hope and sadness were the most consistent across countries (bold fonts); for three out of four wellbeing outcomes, determination, love, loneliness, and regret were also consistent across countries (underlined)

Further analyses for Study 1

We further sought to establish the robustness of the present findings in Study 1 using three different additional analytical approaches.

Further analyses 1: using exploratory structural equation modelling (ESEM)

In addition to the multilevel regression analyses, we also estimated a latent regression model of wellbeing on emotions via exploratory structural equation modelling (ESEM, Asparouhov & Muthén, 2009). The same weighted least square estimator, adjustment for cluster sampling, and rotation method as described in the “wellbeing factor structure” section were adopted in the ESEM analysis. The number of common factors extracted for well-being was fixed at four while that for emotions ranged from four to nine. The eight-factor solution for emotions was considered optimal because 1) the model fit was excellent (CFI = 0.98, RMSEA = 0.01, SRMR = 0.01), and 2) each factor had at least two loadings greater than 0.25. The estimated factor loadings are summarized in Table S13 (A).

The standardized regression coefficients are summarized in Table S13 (B). It is worth noting that most coefficients are significant as the sample size is large; we therefore base our interpretation solely on the effect size estimates. The second emotion factor, which is mainly measured by determination and hope, was the strongest predictor of wellness, resilience, and health. It did not, however, have a substantial effect on distress. Emotion factor 8, which is indicated by the negative emotions loneliness, regret, frustration, and sadness, had a negative partial effect on wellness and a positive partial effect on distress. The other two factors that predict distress are factors 3 (anxiety, confusion, fear, sadness, and lack of calm) and 7 (calm and relief). The ESEM results are thus largely consistent with the reported multilevel regression analysis, in that latent factors with large effects in the ESEM are mostly represented by emotions with large effects in the multilevel model.

A								
Items	Emotion Factors							
	1	2	3	4	5	6	7	8
Admiration	0.63	-0.01	-0.10	0.05	-0.04	0.02	0.10	-0.02
Calm	0.02	0.28	-0.28	-0.06	0.07	0.10	0.28	-0.03
Compass	0.51	0.14	0.10	-0.03	0.01	0.06	-0.06	0.03
Determination	0.02	0.68	-0.01	0.08	-0.08	0.03	-0.02	0.02
Moved	0.69	0.02	0.00	0.06	0.01	0.02	-0.09	0.04
Gratitude	0.54	0.10	0.07	-0.11	-0.02	0.08	0.13	-0.03
Hope	0.15	0.51	0.05	-0.12	0.04	-0.01	0.14	-0.03
Love	0.29	0.08	0.05	-0.09	-0.02	0.51	0.01	-0.09
Relief	0.04	0.13	0.04	0.02	0.02	0.05	0.53	0.02
Pleasure	0.03	0.11	-0.11	0.04	-0.03	0.38	0.22	0.14
Anger	-0.06	0.03	0.09	0.63	0.05	0.09	-0.07	0.10
Anxiety	0.00	-0.03	0.66	0.03	0.06	0.06	-0.11	0.12
Boredom	-0.02	-0.03	0.00	0.03	0.84	0.02	0.01	-0.05
Confusion	0.01	-0.05	0.45	0.19	0.06	0.02	0.03	0.14
Disgust	0.06	0.00	0.00	0.75	0.03	-0.08	0.05	-0.07
Fear	0.00	0.01	0.88	0.01	0.00	-0.02	0.05	-0.05
Frustration	-0.05	-0.07	0.19	0.27	0.15	0.15	-0.14	0.30
Loneliness	0.04	0.00	0.08	0.00	0.42	-0.20	-0.02	0.39
Regret	0.06	-0.15	0.21	0.23	-0.03	-0.05	0.20	0.34
Sadness	0.12	-0.02	0.28	0.14	0.10	-0.05	-0.12	0.37
Items	Well-being							
	Wellness	Resilience	Health	Distress				
Euda1	0.46	0.37	0.12	-0.09				
Euda2	0.63	0.32	0.00	0.03				
Swl	0.68	0.00	0.11	-0.10				
Res1	0.05	0.77	0.05	0.00				
Res2	-0.01	0.88	0.00	-0.04				
Mental	0.32	-0.04	0.58	-0.15				
Physical	-0.09	0.06	0.79	0.04				
Stressed	0.02	-0.03	0.06	0.84				
Tired	0.12	-0.05	-0.06	0.76				
Depressed	-0.26	0.05	-0.06	0.64				
B								
	Emo1	Emo2	Emo3	Emo4	Emo5	Emo6	Emo7	Emo8
Wellness	-0.14	0.54	0.13	-0.06	-0.09	0.19	0.09	-0.34
Resilience	-0.19	0.86	-0.13	0.00	0.00	0.08	-0.18	-0.03
Health	-0.12	0.35	-0.12	-0.07	-0.01	0.13	0.02	-0.17
Distress	0.05	-0.10	0.25	0.15	0.08	0.00	-0.23	0.23

Table S13. Exploratory structural equation modelling results

Panel A. estimated factor loadings of the eight emotion factors

Panel B. standardized regression coefficients of emotions on wellbeing facets

Further analyses 2: Testing model fit for models with country-level factors

To validate the model fit for the models involving country-level factors, we divided the data into a “training” set and a “validation” set, with a random half of the participants from each country in each set. We fit the model built in the “training” set to the “validation” data set. The estimated parameters and variance explained by the training and validation models were consistent (see Figs S1-S5 for illustration).

Further analyses 3: Zero-order correlation tests

In order to get indices of the direct relationships between individual emotions and psychological wellbeing without controlling for other emotions, we ran zero-order Pearson correlation tests. Given the nested structure of the dataset, we ran the tests at both Level 1 (individual level) and Level 2 (country-level) using multilevel saturated model in MPlus. As both emotion and wellbeing are individual-level variables, the zero-order correlation at Level 1 was our focus. We also ran zero-order correlations using the whole sample without separating Level 1 and Level 2, as the variance explained by country-level variables was small. The zero-order correlation results that did not consider the nested structure were very similar to Level 1 results; we therefore only report the former. The correlations are reported in Supplementary Materials Table S18.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	Admiration	1																						
2	Calm	0.24																						
3	Compassion	0.34	0.15																					
4	Determination	0.36	0.33	0.29																				
5	Moved	0.39	0.11	0.41	0.26																			
6	Gratitude	0.44	0.28	0.40	0.36	0.37																		
7	Hope	0.37	0.36	0.29	0.46	0.28	0.42																	
8	Love	0.37	0.24	0.35	0.34	0.30	0.43	0.36																
9	Relief	0.26	0.31	0.18	0.28	0.15	0.30	0.34	0.21															
10	Pleasure	0.24	0.26	0.21	0.27	0.21	0.27	0.26	0.33	0.24														
11	Anger	-0.08	-0.30	0.03	-0.10	0.09	-0.10	-0.18	-0.11	-0.08	-0.04													
12	Anxiety	-0.06	-0.38	0.10	-0.14	0.14	-0.03	-0.18	-0.06	-0.11	-0.08	0.47												
13	Boredom	-0.11	-0.17	-0.03	-0.17	0.00	-0.12	-0.12	-0.17	-0.05	-0.11	0.31	0.34											
14	Confusion	-0.02	-0.29	0.07	-0.11	0.14	-0.03	-0.12	-0.07	-0.06	-0.05	0.45	0.54	0.32										
15	Disgust	0.00	-0.18	0.04	-0.05	0.07	-0.06	-0.14	-0.11	-0.02	-0.04	0.48	0.35	0.25	0.36									
16	Fear	0.01	-0.31	0.15	-0.08	0.18	0.02	-0.11	-0.02	-0.05	-0.05	0.42	0.64	0.29	0.52	0.34								
17	Frustration	-0.11	-0.36	0.04	-0.17	0.05	-0.11	-0.25	-0.12	-0.13	-0.08	0.54	0.57	0.38	0.49	0.38	0.48							
18	Loneliness	-0.11	-0.26	-0.01	-0.16	0.04	-0.13	-0.17	-0.25	-0.09	-0.13	0.36	0.43	0.50	0.41	0.29	0.38	0.48						
19	Regret	-0.03	-0.22	0.06	-0.09	0.09	-0.03	-0.10	-0.10	0.00	-0.03	0.39	0.41	0.25	0.42	0.34	0.40	0.41	0.38					
20	Sadness	-0.05	-0.33	0.12	-0.12	0.17	-0.05	-0.15	-0.10	-0.10	-0.08	0.50	0.58	0.35	0.50	0.35	0.53	0.56	0.52	0.45				
21	Wellness	0.28	0.43	0.20	0.43	0.16	0.35	0.45	0.39	0.29	0.27	-0.30	-0.35	-0.28	-0.29	-0.23	-0.26	-0.40	-0.39	-0.31	-0.37			
22	Resilience	0.24	0.36	0.20	0.43	0.15	0.29	0.39	0.30	0.21	0.24	-0.22	-0.27	-0.21	-0.24	-0.16	-0.24	-0.28	-0.26	-0.23	-0.26	0.67		
23	Health	0.19	0.36	0.10	0.29	0.04	0.20	0.30	0.26	0.18	0.18	-0.31	-0.37	-0.26	-0.31	-0.25	-0.30	-0.37	-0.37	-0.28	-0.38	0.58	0.45	
24	Distress	-0.12	-0.41	-0.01	-0.21	0.04	-0.14	-0.25	-0.16	-0.20	-0.15	0.42	0.53	0.32	0.45	0.31	0.43	0.53	0.44	0.36	0.50	-0.49	-0.36	-0.45

Table S14. Zero-order correlations for emotion – wellbeing relationships
Emotion – wellbeing correlations (absolute values) above 0.35 are bolded

Note: four wellbeing facets are highlighted in grey.

Study 2. Pre-registered analysis with representative samples

A				
	N	Mean age (SD)	Mean education (SD)	Percentage female
UK	971	46.91 (15.72)	15.37 (3.45)	52.32%
US	961	45.92 (16.28)	15.80 (2.95)	51.40%
B				
		UK	US	
Admiration		3.28 (1.77)	2.6 (1.77)	
Calm		3.43 (1.43)	3.6 (1.54)	
Compassion		3.96 (1.46)	3.89 (1.55)	
Determination		3.6 (1.49)	3.69 (1.59)	
Moved		3.35 (1.69)	2.8 (1.71)	
Gratitude		3.73 (1.60)	3.72 (1.67)	
Hope		3.31 (1.48)	3.36 (1.67)	
Love		4.11 (1.66)	4.06 (1.71)	
Relief		2.25 (1.50)	2.15 (1.56)	
Pleasure		3.62 (1.54)	3.56 (1.64)	
Anger		2.38 (1.82)	1.87 (1.78)	
Anxiety		3.25 (1.86)	2.95 (1.97)	
Boredom		3.05 (2.00)	2.75 (1.96)	
Confusion		2.46 (1.86)	1.58 (1.65)	
Disgust		1.79 (1.79)	1.62 (1.79)	
Fear		2.42 (1.80)	1.98 (1.86)	
Frustration		3.44 (1.78)	2.86 (1.87)	
Loneliness		2.23 (2.03)	2.09 (1.91)	
Regret		1.94 (1.74)	1.5 (1.68)	
Sadness		3.08 (1.83)	2.36 (1.82)	
Wellness		3.44 (1.37)	3.79 (1.43)	
Resilience		3.87 (1.34)	4.08 (1.37)	
Health		4.16 (1.33)	4.41 (1.28)	
Distress		2.63 (1.61)	2.4 (1.71)	
Mean Positive Emotions		3.46 (1.03)	3.34 (1.12)	
Mean Negative Emotions		2.61 (1.29)	2.16 (1.35)	

Table S15. Demographic information, emotion and wellbeing means (SD) of the two representative samples

Note: The emotion and wellbeing variables ranged 0-6

Factor analysis for wellbeing outcomes

Following our pre-registered analysis plan, we first explored the wellbeing factor structure. Parameter estimation was configured like in the analysis of the global sample, except that no adjustment for cluster sampling was needed. The same 4-factor structure as in the global sample was found in the UK sample (CFI = 0.99, RMSEA = 0.08, SRMR = 0.01) and US sample (CFI = 0.99, RMSEA = 0.07, SRMR = 0.01). We pre-registered a 2-factor wellbeing structure based on analyses of part of the global dataset. However, the 4-factor wellbeing structure had better model fit for both the 51-country dataset and the two pre-registered datasets and was therefore adopted. The estimated factor loadings and inter-factor correlations are tabulated in Table S20 (A), with factor loadings greater than 0.4 highlighted in bold. Cronbach Alpha for the UK sample was 0.88 (Wellness), 0.89 (Resilience), 0.73 (Health), 0.83 (Distress), and for the US sample 0.90 (Wellness), 0.87 (Resilience), 0.73 (Health), 0.86 (Distress). These results show that the construct of wellbeing fits a four-factor independent-cluster structure in all three samples (the 51-country sample and the two representative samples), which was the basis for our decision to use four sub-scores as outcome variables in the multilevel regression analysis. Similar to the analysis of the 51-country dataset, in the US and the UK samples, 4-factor wellbeing structures outperformed 2- and 3- factors (see Table S16 (B)).

A							
UK sample				US sample			
Wellness	Resilience	Health	Distress	Wellness	Resilience	Health	Distress
0.61	0.18	0.11	-0.13	0.63	0.22	0.09	-0.08
0.92	0.05	-0.03	0.05	0.96	0.03	-0.05	0.04
0.75	-0.07	0.06	-0.06	0.70	-0.10	0.15	-0.12
0.02	0.88	0.00	0.01	0.03	0.87	0.03	0.02
-0.01	0.94	0.01	-0.01	-0.01	0.91	-0.01	-0.03
0.21	0.15	0.48	-0.27	0.08	0.16	0.51	-0.26
-0.01	0.00	0.79	0.04	0.04	0.01	0.73	0.05
0.05	-0.04	0.03	0.91	0.00	0.01	0.09	0.92
0.04	0.04	-0.11	0.67	0.04	-0.03	-0.12	0.71
-0.27	0.00	-0.01	0.66	-0.12	-0.03	-0.08	0.71
Wellness	Resilience	Health	Distress	Wellness	Resilience	Health	Distress
1.00				1.00			
0.74	1.00			0.80	1.00		
0.60	0.46	1.00		0.64	0.52	1.00	
-0.60	-0.50	-0.49	1.00	-0.60	-0.52	-0.55	1.00
B							
UK sample				US sample			
Model	RMSEA	CFI	SRMR	RMSEA	CFI	SRMR	
2-factor	0.151	0.930	0.048	0.168	0.926	0.048	
3-factor	0.120	0.969	0.022	0.131	0.969	0.021	
4-factor	0.078	0.992	0.010	0.072	0.994	0.008	

Table S16. Wellbeing factor analysis for the UK and the US samples

(A) Factor analysis of wellbeing for the two samples.

(B) Factor structure comparison for the two samples.

UK	Wellness		Resilience		Health		Distress	
	M0	M1	M0	M1	M0	M1	M0	M1
Age	0.276*** (0.044)	-0.066* (0.032)	0.277*** (0.043)	0.014 (0.036)	0.285*** (0.042)	0.018 (0.036)	-0.448*** (0.05)	-0.062 (0.036)
Gender	0.124 (0.087)	0.049 (0.061)	0.133 (0.086)	0.127 (0.07)	0.214* (0.084)	0.097 (0.07)	-0.599*** (0.1)	-0.281*** (0.07)
Education	0.200*** (0.044)	0.085** (0.03)	0.154*** (0.043)	0.063 (0.035)	0.134** (0.042)	0.045 (0.035)	-0.101* (0.05)	0.023 (0.035)
Positive Emotions		0.733*** (0.031)		0.667*** (0.036)		0.455*** (0.035)		-0.358*** (0.036)
Negative Emotions		-0.653*** (0.032)		-0.425*** (0.036)		-0.597*** (0.036)		1.090*** (0.036)
Intercept	3.382*** (0.06)	3.414*** (0.041)	3.808*** (0.059)	3.808*** (0.048)	4.065*** (0.057)	4.118*** (0.047)	2.914*** (0.068)	2.764*** (0.048)
Observations	955	955	955	955	955	955	955	955
R2	0.055	0.559	0.051	0.393	0.056	0.374	0.108	0.581
Adjusted R2	0.052	0.556	0.048	0.389	0.053	0.37	0.105	0.579
Residual Std. Error	1.338 (df = 951)	0.915 (df = 949)	1.311 (df = 951)	1.050 (df = 949)	1.282 (df = 951)	1.046 (df = 949)	1.528 (df = 951)	1.049 (df = 949)
F Statistic	18.331*** (df = 3; 951)	240.258*** (df = 5; 949)	17.004*** (df = 3; 951)	122.646*** (df = 5; 949)	18.887*** (df = 3; 951)	113.194*** (df = 5; 949)	38.388*** (df = 3; 951)	262.950*** (df = 5; 949)

US	Wellness		Resilience		Health		Distress	
	M0	M1	M0	M1	M0	M1	M0	M1
Age	0.301*** (0.046)	-0.041 (0.033)	0.336*** (0.043)	0.074* (0.037)	0.291*** (0.041)	0.049 (0.035)	-0.382*** (0.054)	0.018 (0.036)
Gender	-0.091 (0.091)	-0.051 (0.063)	0.164 (0.086)	0.207** (0.07)	0.078 (0.082)	0.076 (0.067)	-0.372*** (0.108)	-0.238*** (0.068)
Education	0.074 (0.046)	0.079* (0.031)	0.054 (0.043)	0.058 (0.035)	0.071 (0.041)	0.075* (0.033)	-0.007 (0.054)	-0.013 (0.034)
Positive Emotions		0.723*** (0.033)		0.589*** (0.037)		0.427*** (0.035)		-0.335*** (0.036)
Negative Emotions		-0.655*** (0.033)		-0.469*** (0.037)		-0.544*** (0.035)		1.247*** (0.036)
Intercept	3.829*** (0.063)	3.812*** (0.043)	3.999*** (0.06)	3.980*** (0.048)	4.369*** (0.057)	4.371*** (0.047)	2.583*** (0.075)	2.518*** (0.047)
Observations	946	946	946	946	946	946	946	946
R2	0.05	0.559	0.065	0.397	0.056	0.371	0.06	0.637
Adjusted R2	0.047	0.557	0.062	0.394	0.053	0.368	0.057	0.635
Residual Std. Error	1.399 (df = 942)	0.954 (df = 940)	1.324 (df = 942)	1.065 (df = 940)	1.254 (df = 942)	1.025 (df = 940)	1.663 (df = 942)	1.034 (df = 940)
F Statistic	16.415*** (df = 3; 942)	238.303*** (df = 5; 940)	21.870*** (df = 3; 942)	123.798*** (df = 5; 940)	18.529*** (df = 3; 942)	110.887*** (df = 5; 940)	19.922*** (df = 3; 942)	329.700*** (df = 5; 940)

Note: * p<0.05; ** p<0.01; *** p<0.001

Table S17. Pre-registration Model 0 and Model 1, positive and negative emotions – wellbeing relationship, for UK and US samples

UK	Wellness		Resilience		Health		Distress	
	M2	M3	M2	M3	M2	M3	M2	M3
Age	-0.03 (0.031)	-0.037 (0.03)	0.027 (0.036)	0.023 (0.036)	0.036 (0.038)	0.03 (0.037)	-0.069 (0.037)	-0.068 (0.037)
Gender	-0.026 (0.06)	-0.042 (0.058)	-0.046 (0.07)	-0.053 (0.069)	-0.01 (0.072)	-0.024 (0.07)	-0.169* (0.071)	-0.167* (0.071)
Education	0.075** (0.028)	0.01 (0.028)	0.038 (0.033)	0.009 (0.034)	0.031 (0.034)	-0.027 (0.034)	0.033 (0.034)	0.039 (0.035)
SES		0.276*** (0.03)		0.125*** (0.036)		0.247*** (0.036)		-0.027 (0.037)
Admiration	0.043 (0.038)	0.025 (0.036)	0.075 (0.044)	0.067 (0.044)	0.098* (0.045)	0.081 (0.044)	-0.055 (0.045)	-0.053 (0.045)
Calm	0.280*** (0.038)	0.248*** (0.037)	0.336*** (0.044)	0.322*** (0.044)	0.247*** (0.046)	0.219*** (0.045)	-0.222*** (0.045)	-0.219*** (0.046)
Compassion	-0.063 (0.039)	-0.03 (0.037)	-0.003 (0.045)	0.011 (0.045)	-0.066 (0.046)	-0.037 (0.045)	0.032 (0.046)	0.029 (0.046)
Determination	0.265*** (0.036)	0.266*** (0.034)	0.327*** (0.042)	0.328*** (0.041)	0.179*** (0.043)	0.180*** (0.042)	-0.03 (0.043)	-0.03 (0.043)
Moved	0.055 (0.038)	0.011 (0.036)	0.039 (0.044)	0.019 (0.044)	0.008 (0.045)	-0.031 (0.044)	-0.084 (0.045)	-0.084 (0.045)
Gratitude	0.056 (0.039)	0.052 (0.037)	0.016 (0.045)	0.015 (0.045)	-0.001 (0.047)	-0.004 (0.045)	0.01 (0.046)	0.01 (0.046)
Hope	0.197*** (0.039)	0.192*** (0.037)	0.104* (0.045)	0.102* (0.045)	0.09 (0.046)	0.086 (0.045)	-0.144** (0.046)	-0.144** (0.046)
Love	0.164*** (0.036)	0.139*** (0.035)	0.061 (0.042)	0.05 (0.042)	0.078 (0.043)	0.056 (0.043)	-0.013 (0.043)	-0.011 (0.043)
Relief	0.051 (0.032)	0.045 (0.031)	0.021 (0.037)	0.019 (0.037)	0.009 (0.038)	0.005 (0.037)	0.048 (0.038)	0.048 (0.038)
Pleasure	0.049 (0.032)	0.045 (0.03)	0.079* (0.037)	0.078* (0.037)	0.062 (0.038)	0.059 (0.037)	-0.062 (0.038)	-0.062 (0.038)
Anger	0.049 (0.039)	0.034 (0.038)	-0.005 (0.046)	-0.012 (0.045)	-0.004 (0.047)	-0.018 (0.046)	0.112* (0.047)	0.114* (0.047)
Anxiety	-0.126** (0.048)	-0.102* (0.046)	-0.213*** (0.056)	-0.202*** (0.056)	-0.086 (0.058)	-0.064 (0.056)	0.428*** (0.057)	0.425*** (0.057)
Boredom	-0.04 (0.035)	-0.056 (0.034)	0.003 (0.041)	-0.005 (0.04)	-0.013 (0.042)	-0.027 (0.041)	0.107** (0.042)	0.109** (0.042)
Confusion	0.007 (0.035)	0.002 (0.034)	-0.041 (0.041)	-0.044 (0.041)	0.003 (0.042)	-0.001 (0.041)	-0.006 (0.042)	-0.005 (0.042)
Disgust	-0.024 (0.034)	-0.01 (0.033)	0.02 (0.04)	0.027 (0.039)	-0.004 (0.041)	0.009 (0.04)	0.044 (0.04)	0.043 (0.041)
Fear	0.007 (0.042)	0.005 (0.041)	-0.038 (0.049)	-0.039 (0.049)	-0.137** (0.051)	-0.139** (0.049)	0.061 (0.05)	0.061 (0.05)
Frustration	-0.096* (0.041)	-0.113** (0.039)	0.067 (0.048)	0.06 (0.047)	-0.103* (0.049)	-0.118* (0.048)	0.159** (0.049)	0.160** (0.049)
Loneliness	-0.219*** (0.038)	-0.172*** (0.036)	-0.085 (0.044)	-0.064 (0.044)	-0.202*** (0.045)	-0.160*** (0.045)	0.227*** (0.045)	0.222*** (0.045)
Regret	-0.194*** (0.035)	-0.176*** (0.033)	0.0001 (0.04)	0.008 (0.04)	-0.06 (0.041)	-0.044 (0.04)	0.086* (0.041)	0.084* (0.041)
Sadness	-0.069 (0.042)	-0.058 (0.04)	-0.074 (0.049)	-0.069 (0.049)	-0.049 (0.05)	-0.039 (0.049)	0.147** (0.05)	0.146** (0.05)
Intercept	3.448*** (0.04)	3.456*** (0.038)	3.889*** (0.046)	3.892*** (0.046)	4.168*** (0.047)	4.174*** (0.046)	2.712*** (0.047)	2.711*** (0.047)
Observations	955	955	955	955	955	955	955	955
R2	0.626	0.658	0.474	0.481	0.42	0.448	0.619	0.619
Adjusted R2	0.617	0.649	0.461	0.467	0.406	0.434	0.61	0.61
Residual Std. Error	0.851 (df = 931)	0.814 (df = 930)	0.986 (df = 931)	0.980 (df = 930)	1.016 (df = 931)	0.992 (df = 930)	1.009 (df = 931)	1.009 (df = 930)
F Statistic	67.743*** (df = 23; 931)	74.585*** (df = 24; 930)	36.455*** (df = 23; 931)	35.873*** (df = 24; 930)	29.294*** (df = 23; 931)	31.422*** (df = 24; 930)	65.812*** (df = 23; 931)	63.059*** (df = 24; 930)

US	Wellness		Resilience		Health		Distress	
	M2	M3	M2	M3	M2	M3	M2	M3
Age	-0.046 (0.033)	-0.039 (0.031)	0.05 (0.037)	0.053 (0.037)	0.059 (0.036)	0.064 (0.036)	-0.008 (0.036)	-0.008 (0.036)
Gender	-0.018 (0.061)	-0.07 (0.059)	0.174* (0.07)	0.151* (0.07)	0.034 (0.069)	-0.0005 (0.068)	-0.081 (0.067)	-0.079 (0.068)
Education	0.079** (0.029)	0.0002 (0.029)	0.076* (0.033)	0.041 (0.035)	0.083* (0.033)	0.032 (0.034)	-0.032 (0.032)	-0.028 (0.034)
SES		0.262*** (0.03)		0.117** (0.036)		0.172*** (0.035)		-0.013 (0.035)
Admiration	-0.021 (0.038)	-0.021 (0.037)	-0.066 (0.044)	-0.066 (0.044)	-0.062 (0.043)	-0.062 (0.043)	-0.033 (0.042)	-0.033 (0.042)
Calm	0.113** (0.041)	0.106** (0.039)	0.075 (0.047)	0.073 (0.046)	0.231*** (0.046)	0.227*** (0.045)	-0.197*** (0.045)	-0.196*** (0.045)
Compassion	0.0004 (0.041)	0.002 (0.039)	0.073 (0.047)	0.073 (0.046)	-0.137** (0.046)	-0.136** (0.045)	0.052 (0.045)	0.052 (0.045)
Determination	0.169*** (0.038)	0.175*** (0.037)	0.321*** (0.044)	0.324*** (0.043)	0.094* (0.043)	0.098* (0.042)	-0.032 (0.042)	-0.033 (0.042)
Moved	0.03 (0.039)	0.014 (0.038)	0.071 (0.045)	0.064 (0.045)	0.072 (0.044)	0.061 (0.043)	-0.022 (0.043)	-0.022 (0.043)
Gratitude	0.168*** (0.041)	0.158*** (0.04)	0.013 (0.047)	0.009 (0.047)	0.231*** (0.046)	0.224*** (0.046)	-0.097* (0.046)	-0.096* (0.046)
Hope	0.247*** (0.043)	0.238*** (0.042)	0.252*** (0.05)	0.248*** (0.049)	0.094 (0.049)	0.087 (0.048)	-0.054 (0.048)	-0.053 (0.048)
Love	0.267*** (0.038)	0.226*** (0.037)	0.078 (0.044)	0.059 (0.044)	0.129** (0.043)	0.102* (0.043)	0.002 (0.042)	0.004 (0.042)
Relief	0.013 (0.035)	0.014 (0.034)	-0.058 (0.04)	-0.058 (0.04)	-0.033 (0.039)	-0.033 (0.039)	-0.007 (0.039)	-0.007 (0.039)
Pleasure	0.037 (0.033)	0.033 (0.032)	0.091* (0.038)	0.090* (0.038)	0.048 (0.037)	0.046 (0.037)	-0.072 (0.037)	-0.072 (0.037)
Anger	0.058 (0.046)	0.051 (0.044)	0.014 (0.053)	0.012 (0.052)	0.086 (0.052)	0.082 (0.051)	0.065 (0.051)	0.066 (0.051)
Anxiety	-0.187*** (0.056)	-0.175** (0.054)	-0.182** (0.064)	-0.176** (0.064)	-0.156* (0.063)	-0.147* (0.062)	0.523*** (0.062)	0.523*** (0.062)
Boredom	-0.03 (0.036)	-0.051 (0.035)	0.076 (0.041)	0.066 (0.041)	-0.005 (0.041)	-0.019 (0.04)	0.091* (0.04)	0.092* (0.04)
Confusion	0.03 (0.038)	0.001 (0.037)	-0.086* (0.044)	-0.099* (0.043)	-0.073 (0.043)	-0.092* (0.042)	0.065 (0.042)	0.067 (0.042)
Disgust	-0.02 (0.041)	-0.004 (0.04)	0.015 (0.047)	0.023 (0.047)	-0.057 (0.046)	-0.046 (0.046)	0.014 (0.045)	0.013 (0.045)
Fear	0.128** (0.047)	0.149** (0.046)	0.1 (0.054)	0.109* (0.054)	0.009 (0.053)	0.023 (0.053)	0.06 (0.052)	0.058 (0.052)
Frustration	-0.066 (0.049)	-0.061 (0.047)	0.056 (0.056)	0.058 (0.056)	0.022 (0.055)	0.025 (0.054)	0.042 (0.054)	0.042 (0.054)
Loneliness	-0.079 (0.041)	-0.07 (0.039)	-0.098* (0.047)	-0.094* (0.046)	-0.036 (0.046)	-0.031 (0.045)	0.084 (0.045)	0.084 (0.045)
Regret	-0.277*** (0.037)	-0.283*** (0.036)	-0.167*** (0.043)	-0.169*** (0.042)	-0.122** (0.042)	-0.126** (0.041)	0.172*** (0.041)	0.172*** (0.041)
Sadness	-0.313*** (0.048)	-0.310*** (0.047)	-0.247*** (0.055)	-0.245*** (0.055)	-0.218*** (0.054)	-0.216*** (0.054)	0.396*** (0.053)	0.395*** (0.053)
Intercept	3.796*** (0.041)	3.820*** (0.04)	3.996*** (0.047)	4.007*** (0.047)	4.390*** (0.046)	4.406*** (0.045)	2.444*** (0.045)	2.443*** (0.045)
Observations	946	946	946	946	946	946	946	946
R2	0.634	0.662	0.477	0.483	0.433	0.448	0.689	0.69
Adjusted R2	0.625	0.653	0.464	0.469	0.419	0.433	0.682	0.681
Residual Std. Error	0.877 (df = 922)	0.844 (df = 921)	1.001 (df = 922)	0.996 (df = 921)	0.982 (df = 922)	0.970 (df = 921)	0.966 (df = 922)	0.966 (df = 921)

F Statistic	69.533*** (df = 23; 922)	75.068*** (df = 24; 921)	36.521*** (df = 23; 922)	35.807*** (df = 24; 921)	30.646*** (df = 23; 922)	31.125*** (df = 24; 921)	89.005*** (df = 23; 922)	85.223*** (df = 24; 921)
-------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table S18. Pre-registration Model 2 (modified) and Model 3 (modified), individual emotion – wellbeing relationship, for the UK and the US samples

UK	Wellness	Resilience	Health	Distress	US	Wellness	Resilience	Health	Distress
Age	-0.042 (0.031)	0.027 (0.037)	0.006 (0.038)	-0.033 (0.038)	Age	-0.066* (0.032)	0.024 (0.037)	0.051 (0.037)	0.029 (0.036)
Gender	-0.023 (0.058)	-0.021 (0.07)	-0.007 (0.072)	-0.168* (0.072)	Gender	-0.069 (0.059)	0.115 (0.068)	0.014 (0.069)	-0.107 (0.067)
Education	0.004 (0.028)	-0.014 (0.033)	-0.041 (0.034)	0.041 (0.034)	Education	-0.009 (0.029)	0.018 (0.034)	0.024 (0.034)	-0.027 (0.033)
SES	0.258*** (0.03)	0.109** (0.036)	0.233*** (0.037)	-0.03 (0.037)	SES	0.251*** (0.03)	0.098** (0.035)	0.166*** (0.036)	-0.022 (0.035)
Empathic Concern	-0.023 (0.038)	0.05 (0.046)	0.128** (0.047)	-0.160*** (0.047)	Empathic Concern	-0.01 (0.038)	-0.018 (0.045)	0.031 (0.045)	-0.115** (0.044)
Personal Distress	0.031 (0.038)	-0.056 (0.045)	-0.01 (0.047)	0.163*** (0.047)	Personal Distress	0.001 (0.039)	-0.091* (0.045)	-0.057 (0.046)	0.166*** (0.045)
Covid Prosocial	-0.018 (0.028)	0.015 (0.034)	-0.016 (0.035)	0.019 (0.035)	Covid Prosocial	0.033 (0.03)	0.054 (0.035)	-0.028 (0.035)	-0.002 (0.034)
General Prosocial	-0.054 (0.029)	-0.023 (0.034)	-0.02 (0.035)	0.047 (0.035)	General Prosocial	-0.033 (0.03)	0.080* (0.035)	0.0004 (0.035)	0.04 (0.034)
Rumination	-0.170*** (0.038)	-0.213*** (0.046)	-0.106* (0.048)	0.241*** (0.048)	Rumination	-0.136*** (0.04)	-0.200*** (0.046)	-0.087 (0.047)	0.175*** (0.045)
Reappraisal	0.051 (0.032)	0.147*** (0.038)	0.066 (0.039)	0.006 (0.039)	Reappraisal	0.106*** (0.032)	0.199*** (0.037)	0.046 (0.037)	-0.037 (0.037)
Suppression	-0.06 (0.032)	0.032 (0.039)	0.002 (0.04)	0.110** (0.04)	Suppression	-0.065* (0.033)	0.038 (0.038)	0.022 (0.038)	-0.021 (0.038)
Social Sharing	0.084** (0.031)	0.086* (0.038)	0.053 (0.039)	-0.01 (0.039)	Social Sharing	0.036 (0.032)	-0.021 (0.037)	0.033 (0.037)	0.002 (0.036)
Distraction	0.037 (0.032)	0.085* (0.039)	-0.022 (0.04)	-0.027 (0.04)	Distraction	0.002 (0.032)	0.0005 (0.037)	-0.029 (0.037)	0.062 (0.036)
Acceptance	0.105*** (0.028)	0.105** (0.034)	0.06 (0.034)	-0.067 (0.034)	Acceptance	0.120*** (0.03)	0.102** (0.035)	0.03 (0.035)	-0.044 (0.035)
Self Vulnerable	0.004 (0.031)	0.029 (0.037)	-0.074 (0.038)	0.006 (0.038)	Self Vulnerable	0.067 (0.035)	0.023 (0.041)	-0.014 (0.041)	0.025 (0.04)
Country Vulnerable	-0.036 (0.033)	0.012 (0.039)	0.055 (0.04)	0.011 (0.04)	Country Vulnerable	0.01 (0.036)	0.087* (0.043)	0.026 (0.043)	-0.132** (0.042)
Employment	0.12 (0.074)	0.034 (0.089)	0.207* (0.091)	0.071 (0.091)	Employment	0.197** (0.072)	0.158 (0.084)	0.114 (0.084)	0.039 (0.082)
Covid symptom	0.098 (0.081)	0.113 (0.097)	-0.084 (0.1)	0.220* (0.1)	Covid symptom	0.021 (0.094)	-0.011 (0.109)	-0.406*** (0.11)	0.331** (0.108)
Admiration	0.034 (0.036)	0.057 (0.043)	0.076 (0.045)	-0.065 (0.045)	Admiration	-0.013 (0.037)	-0.074 (0.043)	-0.067 (0.043)	-0.038 (0.042)
Calm	0.218*** (0.037)	0.273*** (0.044)	0.190*** (0.045)	-0.183*** (0.045)	Calm	0.072 (0.039)	0.032 (0.046)	0.208*** (0.046)	-0.139** (0.045)
Compassion	-0.031 (0.037)	-0.016 (0.045)	-0.069 (0.046)	0.053 (0.046)	Compassion	-0.006 (0.039)	0.06 (0.046)	-0.137** (0.046)	0.078 (0.045)
Determination	0.254*** (0.034)	0.302*** (0.041)	0.164*** (0.042)	-0.035 (0.042)	Determination	0.130*** (0.037)	0.273*** (0.043)	0.08 (0.043)	-0.015 (0.042)
Moved	0.004 (0.036)	-0.003 (0.043)	-0.058 (0.044)	-0.067 (0.044)	Moved	-0.021 (0.037)	0.039 (0.043)	0.051 (0.044)	-0.013 (0.043)
Gratitude	0.06	0.011	-0.016	-0.013	Gratitude	0.158***	0.013	0.225***	-0.094*

	(0.037)	(0.044)	(0.045)	(0.045)		(0.039)	(0.046)	(0.046)	(0.045)
Hope	0.168***	0.066	0.074	-0.119**	Hope	0.242***	0.246***	0.093	-0.052
	(0.037)	(0.044)	(0.045)	(0.045)		(0.041)	(0.048)	(0.048)	(0.047)
Love	0.117***	0.045	0.047	0.005	Love	0.221***	0.059	0.093*	0.007
	(0.035)	(0.042)	(0.044)	(0.044)		(0.037)	(0.043)	(0.043)	(0.042)
Relief	0.052	0.021	0.015	0.017	Relief	0.028	-0.061	-0.02	-0.047
	(0.03)	(0.036)	(0.038)	(0.037)		(0.034)	(0.039)	(0.04)	(0.039)
Pleasure	0.037	0.051	0.05	-0.052	Pleasure	0.024	0.062	0.049	-0.090*
	(0.03)	(0.036)	(0.037)	(0.037)		(0.032)	(0.037)	(0.037)	(0.037)
Anger	0.037	0.003	-0.007	0.100*	Anger	0.053	0.019	0.076	0.057
	(0.037)	(0.045)	(0.046)	(0.046)		(0.044)	(0.051)	(0.051)	(0.05)
Anxiety	-0.042	-0.180**	-0.041	0.322***	Anxiety	-0.151**	-0.131*	-0.111	0.465***
	(0.047)	(0.057)	(0.059)	(0.059)		(0.055)	(0.064)	(0.064)	(0.063)
Boredom	-0.04	0.012	-0.032	0.100*	Boredom	-0.039	0.089*	-0.007	0.077
	(0.033)	(0.04)	(0.041)	(0.041)		(0.034)	(0.04)	(0.04)	(0.039)
Confusion	-0.008	-0.065	-0.012	-0.022	Confusion	-0.004	-0.098*	-0.091*	0.044
	(0.034)	(0.04)	(0.042)	(0.042)		(0.036)	(0.042)	(0.043)	(0.042)
Disgust	-0.031	0.008	0.008	0.046	Disgust	0.003	0.013	-0.04	0.019
	(0.032)	(0.039)	(0.04)	(0.04)		(0.039)	(0.046)	(0.046)	(0.045)
Fear	-0.006	-0.048	-0.146**	0.032	Fear	0.123**	0.109*	0.035	0.055
	(0.042)	(0.05)	(0.052)	(0.052)		(0.045)	(0.053)	(0.053)	(0.052)
Frustration	-0.113**	0.041	-0.126**	0.132**	Frustration	-0.042	0.067	0.031	0.024
	(0.039)	(0.047)	(0.048)	(0.048)		(0.047)	(0.054)	(0.055)	(0.054)
Loneliness	-0.169***	-0.044	-0.145**	0.194***	Loneliness	-0.051	-0.105*	-0.028	0.064
	(0.036)	(0.043)	(0.045)	(0.045)		(0.039)	(0.045)	(0.046)	(0.045)
Regret	-0.143***	0.027	-0.035	0.049	Regret	-0.272***	-0.165***	-0.118**	0.163***
	(0.033)	(0.04)	(0.041)	(0.041)		(0.035)	(0.041)	(0.041)	(0.041)
Sadness	-0.035	-0.062	-0.033	0.121*	Sadness	-0.284***	-0.199***	-0.186***	0.346***
	(0.04)	(0.048)	(0.049)	(0.049)		(0.046)	(0.054)	(0.054)	(0.053)
Intercept	3.332***	3.836***	4.005***	2.626***	Intercept	3.656***	3.897***	4.345***	2.392***
	(0.071)	(0.085)	(0.088)	(0.088)		(0.069)	(0.081)	(0.081)	(0.08)
Observations	950	950	950	950	Observations	944	944	944	944
R2	0.682	0.518	0.468	0.647	R2	0.685	0.529	0.463	0.71
Adjusted R2	0.669	0.498	0.446	0.632	Adjusted R2	0.671	0.509	0.441	0.697
Residual Std. Error (Df = 911)	0.792	0.953	0.981	0.981	Residual Std. Error (Df = 905)	0.822	0.958	0.964	0.943
F Statistic (Df = 38; 911)	51.396***	25.751***	21.082***	43.956***	F Statistic (Df = 38; 905)	51.725***	26.728***	20.567***	58.170***

Note: * p<0.05; ** p<0.01; *** p<0.001

Table S19. Pre-registration Model 4, individual emotion- wellbeing relationship with additional control variables, for the UK and the US representative samples

Transformation of regression coefficients

It is worth noting that we pre-registered adding 20 emotions on top of mean positive emotions and mean negative emotions in the model. However, directly adding 20 emotions on top of mean positive and negative emotions would lead to complete multicollinearity. This is because regression coefficients estimated in the multilevel model are partial effects that quantify the unique contribution of individual predictors above and beyond the shared contribution with other predictors in the model. We therefore need additional constraints to identify coefficients for all individual emotions and their mean values simultaneously. The constraint is that the sum of all 10 positive emotions' coefficients is zero, and the sum of all 10 negative emotions' coefficients is zero. The transformation formula is reported below. The transformed coefficients are reported in Table S20. Note that the transformed coefficients of the 20 emotions are linear with non-transformed coefficients.

$$\begin{aligned} Y &= \beta_0 + \beta_1 X_1 + \dots + \beta_p X_p + \epsilon \quad (p \text{ predictions}) \\ &= \beta_0 + \left(\frac{\alpha}{p} + \gamma_1 \right) X_1 + \dots + \left(\frac{\alpha}{p} + \gamma_p \right) X_p + \epsilon \quad (\text{with constraint } \gamma_1 + \dots + \gamma_p = 0) \\ &= \beta_0 + \alpha \left(\frac{X_1 + \dots + X_p}{p} \right) + \gamma_1 X_1 + \dots + \gamma_p X_p + \epsilon \end{aligned}$$

(A) UK	Wellness (T)	Wellness	Resilience (T)	Resilience	Health (T)	Health	Distress (T)	Distress
Mean Positive Emotions	1.08	NA	1.05	NA	0.70	NA	-0.51	NA
Admiration	-0.07	0.04	-0.03	0.07	0.04	0.11	-0.02	-0.07
Calm	0.16	0.27	0.22	0.33	0.18	0.25	-0.18	-0.23
Compassion	-0.17	-0.06	-0.12	-0.01	-0.14	-0.07	0.10	0.05
Determination	0.16	0.27	0.23	0.33	0.10	0.18	0.02	-0.03
Moved	-0.06	0.05	-0.05	0.05	-0.06	0.01	-0.05	-0.10
Gratitude	-0.05	0.06	-0.09	0.02	-0.10	-0.03	0.08	0.03
Hope	0.08	0.19	0.00	0.10	0.02	0.09	-0.10	-0.15
Love	0.06	0.17	-0.04	0.06	0.01	0.08	0.06	0.01
Pleasure	-0.05	0.05	-0.03	0.08	-0.01	0.06	-0.02	-0.07
Relief	-0.05	0.06	-0.08	0.02	-0.06	0.01	0.10	0.05
Mean Negative Emotions	-0.70	NA	-0.39	NA	-0.68	NA	1.40	NA
Anger	0.12	0.05	0.04	0.00	0.07	0.01	-0.04	0.10
Anxiety	-0.06	-0.13	-0.17	-0.21	-0.03	-0.10	0.30	0.44
Boredom	0.02	-0.04	0.03	-0.01	0.04	-0.03	-0.03	0.11
Confusion	0.09	0.02	-0.01	-0.05	0.07	0.00	-0.13	0.01
Disgust	0.05	-0.02	0.06	0.02	0.07	0.00	-0.10	0.04
Fear	0.08	0.01	0.00	-0.04	-0.06	-0.13	-0.07	0.07
Frustration	-0.03	-0.10	0.11	0.07	-0.05	-0.12	0.02	0.16
Loneliness	-0.14	-0.21	-0.05	-0.09	-0.13	-0.20	0.09	0.23
Regret	-0.13	-0.20	0.03	-0.01	0.01	-0.06	-0.05	0.09
Sadness	-0.01	-0.07	-0.03	-0.07	0.02	-0.05	0.02	0.16

(B) US	Wellness (T)	Wellness	Resilience (T)	Resilience	Health (T)	Health	Distress (T)	Distress
Mean Positive Emotions	1.01	NA	0.85	NA	0.67	NA	-0.44	NA
Admiration	-0.12	-0.02	-0.14	-0.05	-0.12	-0.06	0.02	-0.03
Calm	0.01	0.11	0.00	0.09	0.15	0.22	-0.15	-0.20
Compassion	-0.11	-0.01	-0.01	0.07	-0.20	-0.14	0.10	0.05
Determination	0.07	0.17	0.25	0.34	0.04	0.11	0.00	-0.04
Moved	-0.07	0.03	-0.02	0.07	0.02	0.09	0.03	-0.02
Gratitude	0.07	0.17	-0.08	0.00	0.17	0.24	-0.05	-0.09

Hope	0.13	0.23	0.16	0.25	0.01	0.08	0.00	-0.04
Love	0.16	0.26	-0.02	0.06	0.06	0.13	0.04	-0.01
Pleasure	-0.06	0.04	0.00	0.09	-0.02	0.05	-0.02	-0.06
Relief	-0.09	0.01	-0.15	-0.06	-0.11	-0.04	0.04	-0.01
Mean Negative Emotions	-0.74	NA	-0.54	NA	-0.58	NA	1.51	NA
Anger	0.15	0.07	0.06	0.01	0.15	0.09	-0.08	0.07
Anxiety	-0.11	-0.19	-0.16	-0.21	-0.13	-0.19	0.38	0.53
Boredom	0.05	-0.02	0.12	0.06	0.04	-0.01	-0.07	0.08
Confusion	0.12	0.05	-0.02	-0.08	-0.02	-0.07	-0.09	0.06
Disgust	0.04	-0.03	0.07	0.02	0.00	-0.06	-0.14	0.01
Fear	0.20	0.13	0.14	0.09	0.08	0.02	-0.09	0.06
Frustration	-0.01	-0.08	0.11	0.05	0.08	0.03	-0.09	0.06
Loneliness	-0.01	-0.08	-0.06	-0.11	0.01	-0.05	-0.04	0.11
Regret	-0.20	-0.27	-0.11	-0.16	-0.07	-0.13	0.00	0.15
Sadness	-0.23	-0.31	-0.17	-0.22	-0.15	-0.21	0.23	0.38

Table S20. Pre-registered Model 2 for the UK (Panel A) and the US (Panel B) samples

Note: (T) refers to models with constrained coefficients; transformed versus non-transformed coefficients are linear

Pre-registered Model 2: on top of the mean score of positive emotions and mean score of negative emotions, we added individual positive emotions and individual negative emotions into the regression model; we constrained the slopes of individual emotions to add up to 0 to avoid full multicollinearity.

Study 3. Testing a temporal relationship between emotions and wellbeing:

Assessment of wellbeing factors and model set-up

To confirm that the factor structure of wellbeing remained stable during the period of the daily diary study, we fitted a four-factor independent-cluster model in which the factor loading pattern was specified to the data of Days 1, 8, 15, and 22, in accordance with the EFA analysis reported in the global sample and the two representative samples. Because the daily-diary sample is substantially smaller ($N = 110$) than the global and two representative samples, we found that the univariate margins of several seven-category Likert items were not filled, and therefore made the simplification to treat all the items as continuous variables. The four-factor model attained acceptable fit at all four time points, with RMSEA ranging from 0.06 to 0.08, CFI ranging from 0.97 to 0.98, and SRMR ranging from 0.07 to 0.11. To assess the wellbeing outcomes' reliability, we calculated their Cronbach's alpha for the same four days. Wellness (0.85-0.91) and Resilience (0.89-0.97) showed excellent internal consistency, while Health (0.63-0.78) and Distress (0.62-0.74) showed acceptable internal consistency (see Table S24). For all scales, the values remained fairly stable across the four days (see Table S25 for the detailed factor structure results). Therefore, we proceeded to use the four wellbeing facets as outcome measures in the subsequent multilevel analysis.

In order to test the temporal relationship between emotional experience and wellbeing, we conducted a moving average model, using every seven days' mean score of each emotion to predict wellbeing at the end of the seventh day. Because wellbeing on Day $t-1$ predicted wellbeing on Day t (lagged effect of wellbeing), we allowed for the $t-1$ autocorrelation of wellbeing. We compared autoregressive (AR) and autoregressive moving average (ARMA) models based on likelihood ratio tests (LRTs, 82). If the two models did not differ, we retained the model with AR(1) structure. For models with Wellness,

Resilience and Distress as outcome, we retained the AR(1) structure; for Health as outcome, we retained the ARMA (1,1) structure.

We first fit models with only fixed effects and then added random effects (i.e., allowing random variation around the slopes) for all level 1 predictors. As the models failed to converge when random effects were allowed to correlate, we made the simplification of including independent random effects. We added SES, age, and gender on Level 2. As standardization is not advised in longitudinal studies (Moeller, 2015), we report unstandardized coefficients. The results show that the extent to which an individual had, during the past week, experienced momentary feelings of calm, hope, anger, anxiety, boredom, loneliness and sadness predicted their subsequent wellbeing. Detailed results are reported in Table S23.

	Day 1	Day 8	Day 15	Day 22
Wellness	0.85	0.90	0.88	0.91
Resilience	0.89	0.91	0.93	0.97
Health	0.63	0.73	0.76	0.78
Distress	0.74	0.62	0.71	0.71

Table S21. Cronbach's Alpha of the Wellbeing Outcomes Throughout the Diary Period

(A) Factor Loadings Throughout the Diary-Period																
Items	Day 1				Day 8				Day 15				Day 22			
	Wellness	Resilience	Health	Distress	Wellness	Resilience	Health	Distress	Wellness	Resilience	Health	Distress	Wellness	Resilience	Health	Distress
Eudaimonia1	0.92				0.88				0.95				0.92			
Eudaimonia2	0.82				0.92				0.88				0.95			
SWL	0.75				0.89				0.82				0.86			
Resilience1		0.87				0.89				0.94				0.98		
Resilience2		0.92				0.92				0.93				0.96		
Mental Health			0.82				0.83				0.97				0.90	
Physical Health			0.65				0.73				0.73				0.76	
Stressed				0.73				0.71				0.74				0.74
Tired				0.47				0.18				0.36				0.44
Depressed				0.91				0.95				1.00				0.90
(B) Latent (Co-)Variances																
Factors	Day 1				Day 8				Day 15				Day 22			
	Wellness	Resilience	Health	Distress	Wellness	Resilience	Health	Distress	Wellness	Resilience	Health	Distress	Wellness	Resilience	Health	Distress
Wellness	1.00				1.00				1.00				1.00			
Resilience	0.73	1.00			0.88	1.00			0.88	1.00			0.93	1.00		
Health	0.57	0.80	1.00		0.67	0.74	1.00		0.66	0.73	1.00		0.75	0.82	1.00	
Distress	-0.52	-0.72	-0.78	1.00	-0.61	-0.70	-0.66	1.00	-0.58	-0.72	-0.64	1.00	-0.59	-0.68	-0.64	1.00
(C) Measures of Fit for the Respective Models																
Day	RMSEA	CFI	TLI	SRMR												
1	0.061	0.973	0.962	0.102												
8	0.070	0.966	0.950	0.074												
15	0.064	0.978	0.968	0.109												
22	0.084	0.969	0.955	0.071												

Table S22. Results of the Confirmatory Factor Analysis on the Wellbeing Items

	Wellness	Resilience	Health	Distress
Age	-0.007 (0.008)	-0.001 (0.009)	0.012 (0.009)	-0.005 (0.006)
Gender	0.448* (0.204)	0.352 (0.218)	0.259 (0.235)	-0.640*** (0.147)
SES	0.131* (0.059)	0.062 (0.064)	0.194** (0.068)	-0.057 (0.044)
Admiration	-0.094 (0.077)	0.013 (0.076)	0.008 (0.088)	0.114 (0.096)
Calm	0.125*** (0.026)	0.063** (0.024)	0.071* (0.028)	-0.094** (0.03)
Compassion	0.053 (0.045)	0.015 (0.047)	0.066 (0.055)	-0.026 (0.056)
Determination	0.0004 (0.036)	0.009 (0.034)	-0.012 (0.04)	-0.008 (0.041)
Gratitude	0.023 (0.038)	-0.006 (0.043)	-0.022 (0.042)	-0.032 (0.043)
Hope	0.07 (0.045)	0.041 (0.039)	0.110* (0.044)	-0.088 (0.046)
Love	-0.013 (0.027)	-0.018 (0.028)	0.006 (0.031)	-0.03 (0.031)
Moved	-0.042 (0.054)	-0.013 (0.048)	-0.0001 (0.057)	-0.032 (0.061)
Relief	0.059 (0.045)	0.127 (0.065)	-0.003 (0.058)	-0.065 (0.051)
Pleasure	0.012 (0.044)	-0.091 (0.052)	0.011 (0.053)	-0.113 (0.064)
Anger	-0.114* (0.054)	-0.082 (0.064)	-0.150** (0.057)	0.021 (0.059)
Anxiety	-0.130*** (0.033)	-0.188*** (0.045)	-0.112** (0.041)	0.262*** (0.04)
Boredom	-0.123*** (0.034)	-0.106*** (0.028)	-0.022 (0.032)	0.078 (0.041)
Disgust	-0.014 (0.08)	-0.143 (0.081)	0.158 (0.09)	0.038 (0.096)
Fear	-0.018 (0.048)	-0.016 (0.055)	0.008 (0.06)	0.007 (0.061)
Lonely	-0.04 (0.029)	-0.054 (0.032)	-0.098** (0.037)	0.079* (0.04)
Sad	-0.141** (0.046)	-0.115* (0.05)	-0.087 (0.049)	0.225*** (0.047)
Intercept	3.019*** (0.494)	3.595*** (0.535)	2.148*** (0.57)	2.473*** (0.366)
Observations	2,501	2,501	2,501	2,501
Log Likelihood	-2,024.51	-2,206.51	-2,457.90	-2,732.80
Akaike Inf. Crit.	4,131.03	4,495.03	4,999.79	5,547.59
Bayesian Inf. Crit.	4,369.83	4,733.83	5,244.42	5,786.39

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Table S23. Multilevel regression analyses predicting wellbeing from seven-day mean levels of momentary emotional experiences

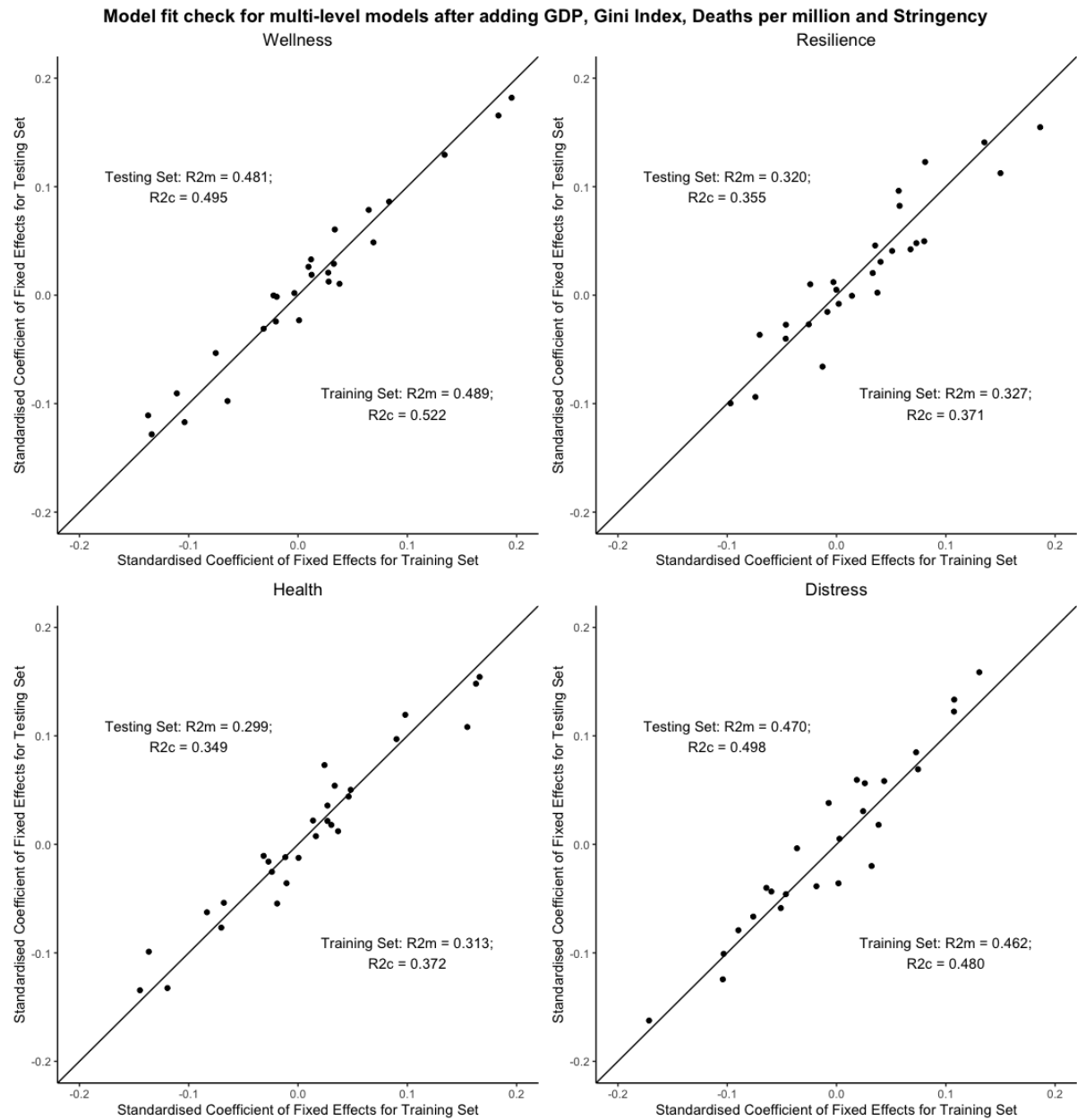


Figure S1. Model fit for multi-level analysis with GDP, Gini Index, deaths per million and stringency in second level

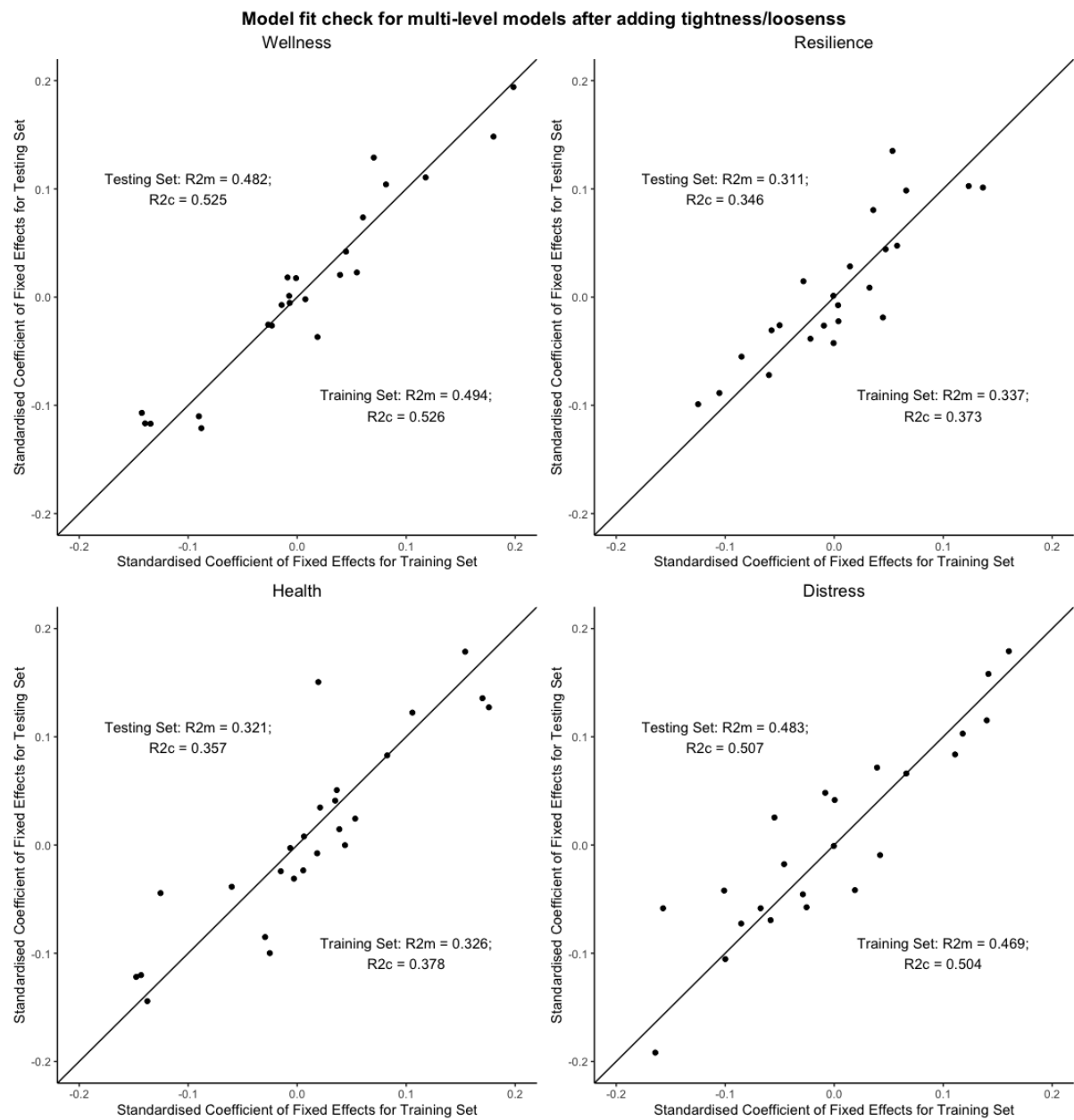


Figure S2. Model fit for multi-level analysis with tightness/looseness in second level

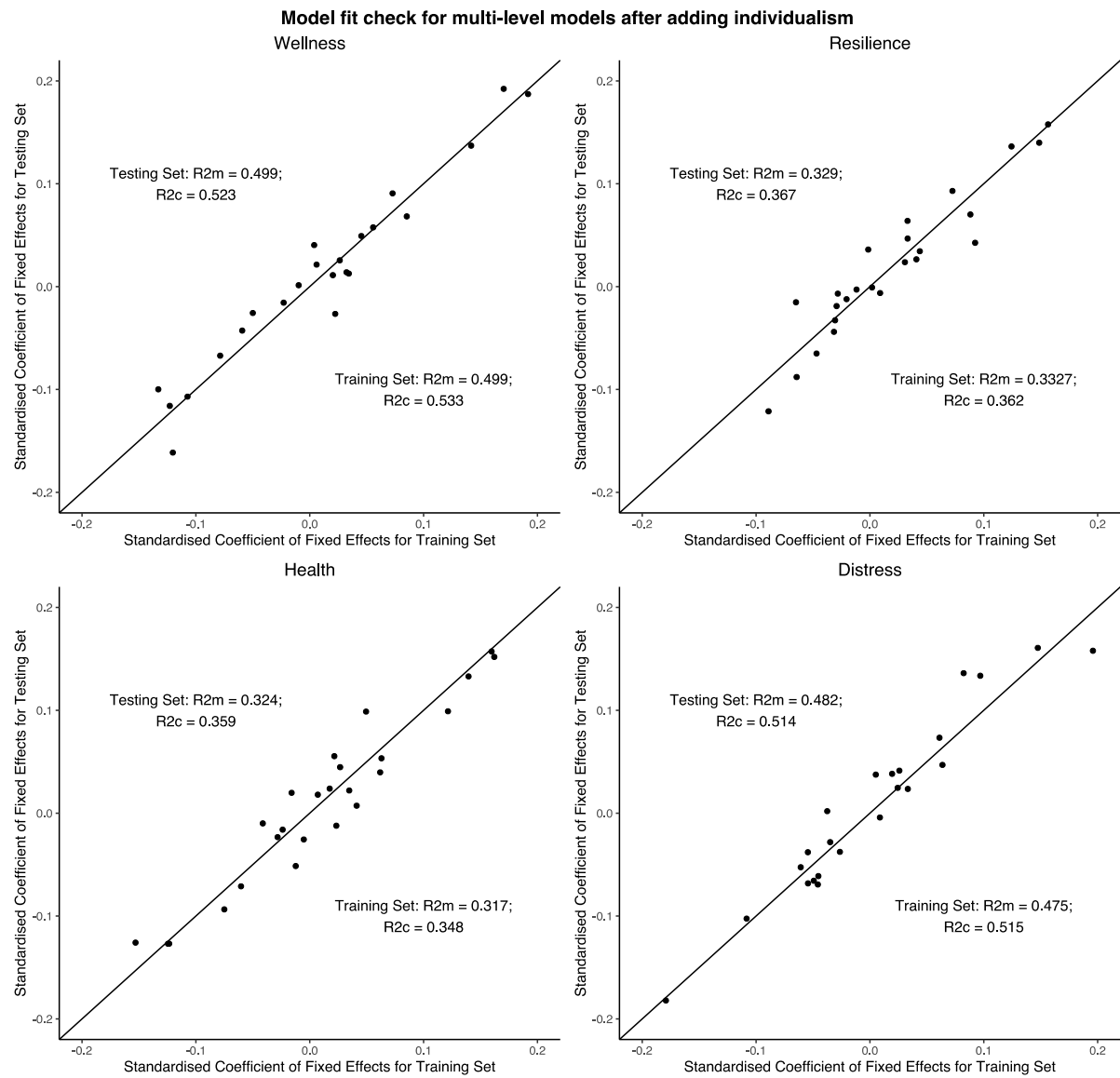


Figure S3. Model fit for multi-level analysis with Individualism in second level

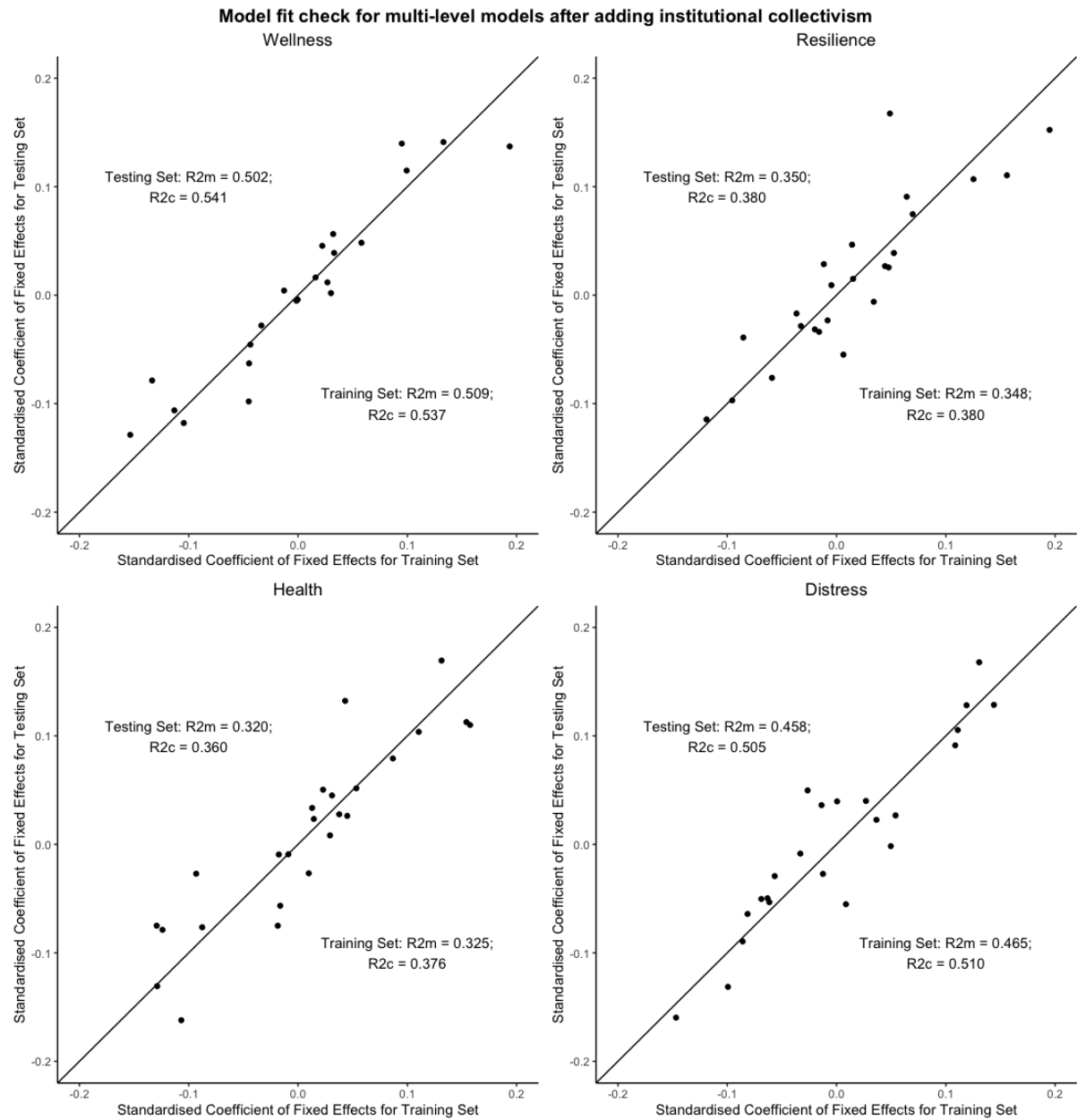


Figure S4. Model fit for multi-level analysis with Institutional Collectivism in second level

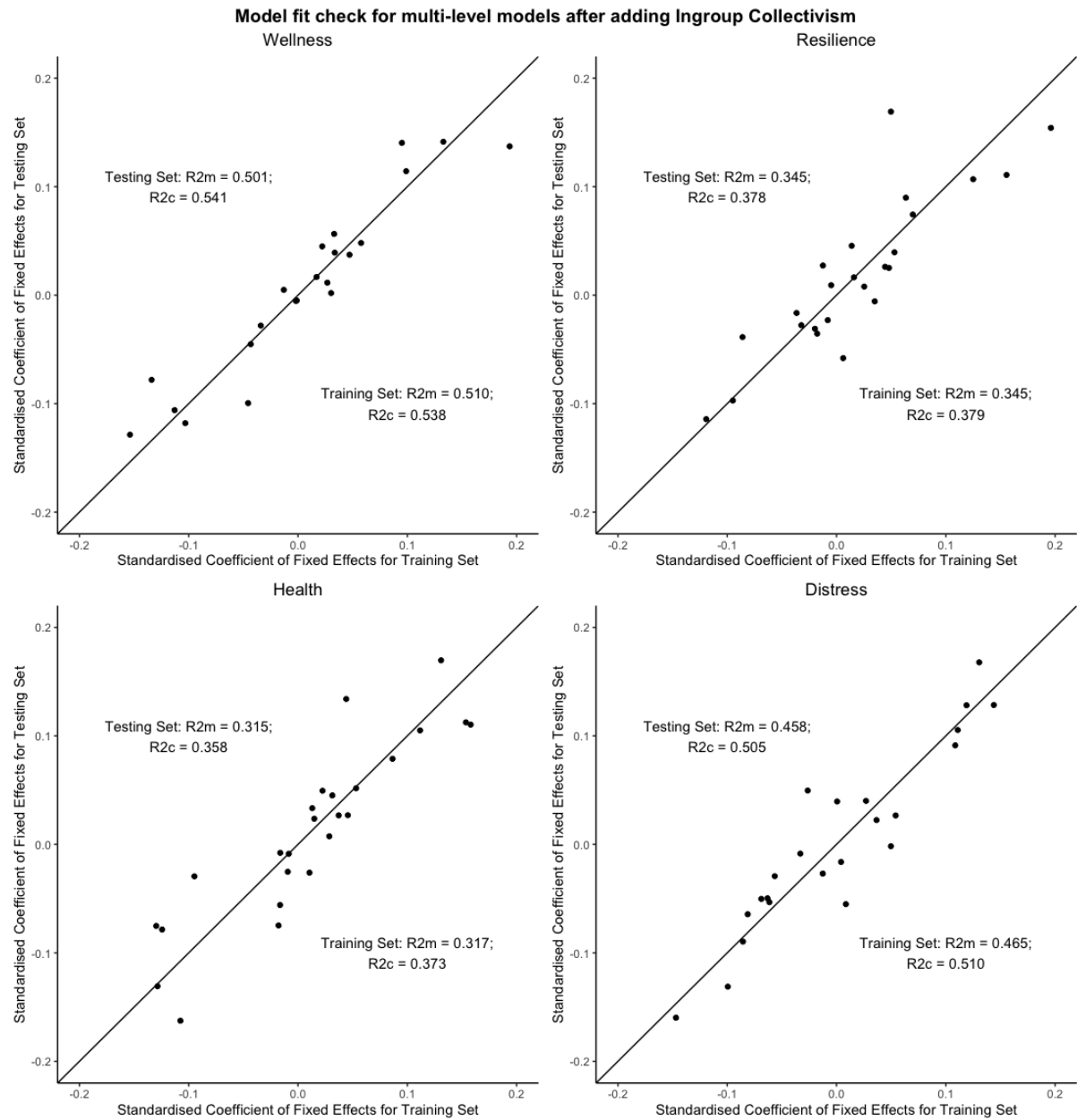


Figure S5. Model fit for multi-level analysis with Ingroup Collectivism in second level

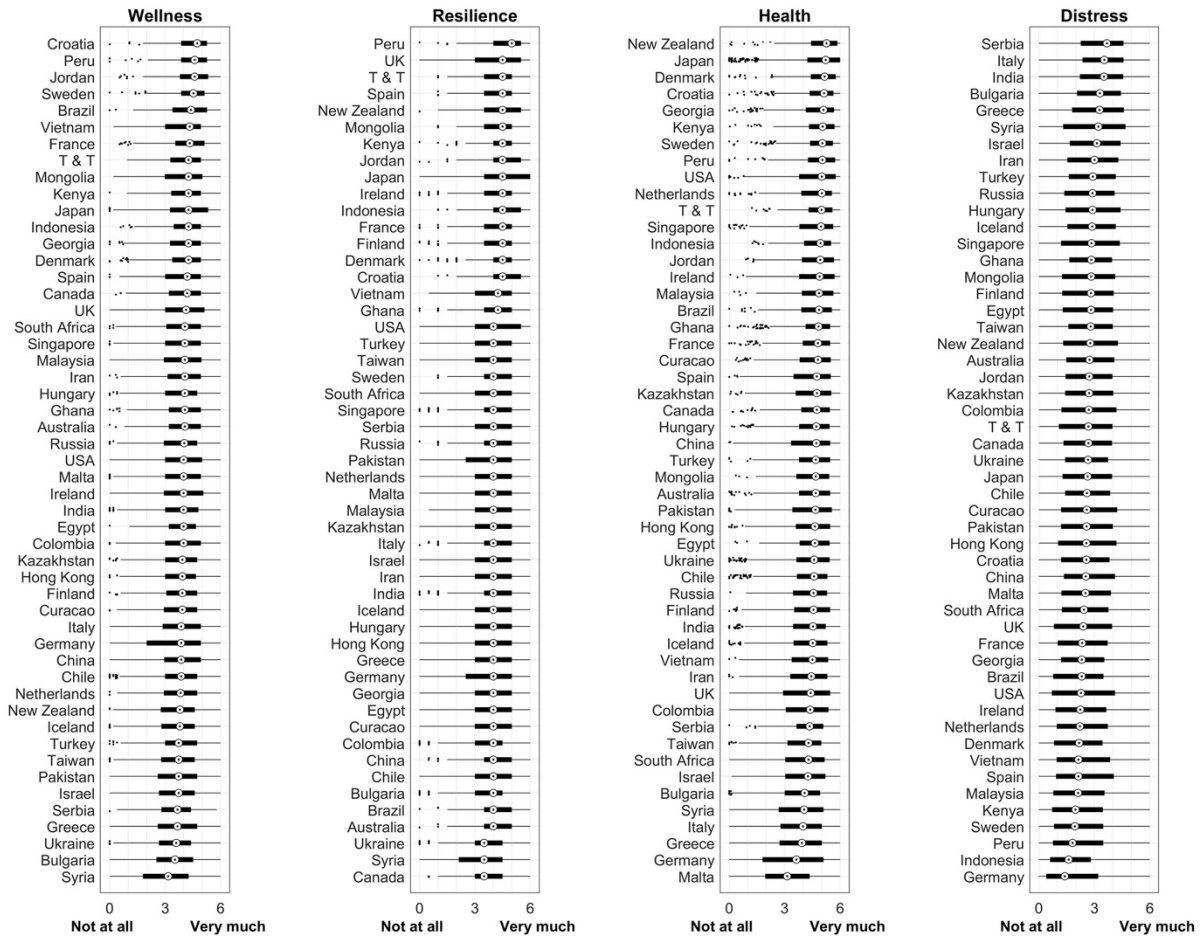


Figure S6. Facets of wellbeing, showing Wellness, Resilience, Health, and Distress for each of the 51 countries included in the analyses. Each boxplot summarizes the statistics of each wellbeing facet across participants per country. Circle with dot: median; lower and upper borders of the box: 25th and 75th percentiles (quartile1 and quartile3, respectively); thin lines: quartile1-1.5 (quartile3-quartile1) and quartile3+1.5 (quartile3-quartile1); dots: outliers. Abbreviations: T & T, Trinidad and Tobago; UK, United Kingdom; USA, United States of America.

- Asparouhov, T., & Muthén, B. (2009). Exploratory structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 16(3), 397–438.
<https://doi.org/10.1080/10705510903008204>
- Block, J., & Kremen, A. M. (1996). IQ and ego-resiliency: conceptual and empirical connections and separateness. *Journal of Personality and Social Psychology*, 70(2), 349.
- Hothorn, T., Bretz, F., Westfall, P., Heiberger, R. M., Schuetzenmeister, A., Scheibe, S., & Hothorn, M. T. (2016). Package ‘multcomp.’ *Simultaneous Inference in General Parametric Models. Project for Statistical Computing, Vienna, Austria*.
- Hou, W. K., & Ng, S. M. (2014). Emotion-focused positive rumination and relationship satisfaction as the underlying mechanisms between resilience and psychiatric symptoms. *Personality and Individual Differences*, 71, 159–164.
<https://doi.org/https://doi.org/10.1016/j.paid.2014.07.032>
- Lucas, R. E., & Donnellan, M. B. (2012). Estimating the Reliability of Single-Item Life Satisfaction Measures: Results from Four National Panel Studies. *Social Indicators Research*, 105(3), 323–331. <https://doi.org/10.1007/s11205-011-9783-z>
- Moeller, J. (2015). A word on standardization in longitudinal studies: don’t. *Frontiers in Psychology*, 6, 1389.
- Möhring, K. (2012). The fixed effects approach as an alternative to multilevel analysis for cross-national analyses. *Crafting Cross-National Social Policy Analysis*, 1–19.
- Rosenberg, M. (2015). *Society and the adolescent self-image*. Princeton university press.
- Waterman, A. S., Schwartz, S. J., Zamboanga, B. L., Ravert, R. D., Williams, M. K., Bede Agocha, V., Kim, S. Y., & Brent Donnellan, M. (2010). The questionnaire for eudaimonic well-being: Psychometric properties, demographic comparisons, and evidence of validity. *Journal of Positive Psychology*, 5(1), 41–61.
<https://doi.org/10.1080/17439760903435208>