Are religion and spirituality determinants of differential health expectancy across Europe?

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Team

Funding:

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'Linking spirituality and religiosity to life and health expectancy: A global comparative study'

Project Team:

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Aims

1) Determine the association between religiosity and spirituality, and self reported health *in individual European countries*

2) Assess contribution of religiosity and spirituality to variation in HLE *between European countries*

Plan

- Data - European Values Study (www.europeanvaluesstudy.eu)
- Principal component analysis
- Meta regression
- Conclusions

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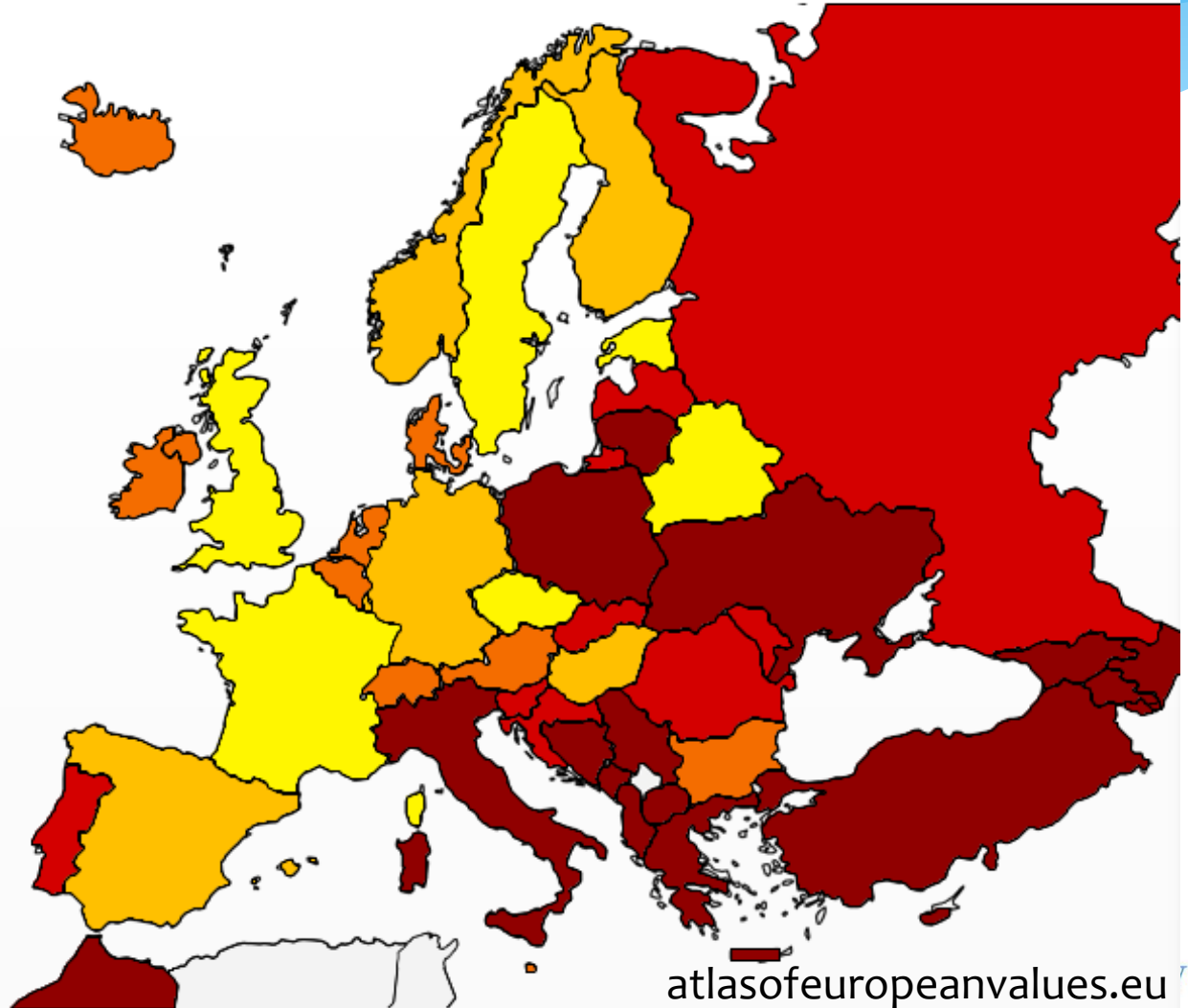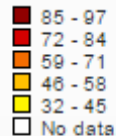
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European Values Survey (EVS)

- 4 waves 1981 – **2008**
  - *large scale*
  - *cross national*
  - *basic human values*
- 47 European countries
- Ages 15-108 years
- **N=67,786**

- 1 question - self reported health (SRH)
  - Responses: **very good/good/fair/poor/very poor**
- 30 questions - religiosity and spirituality

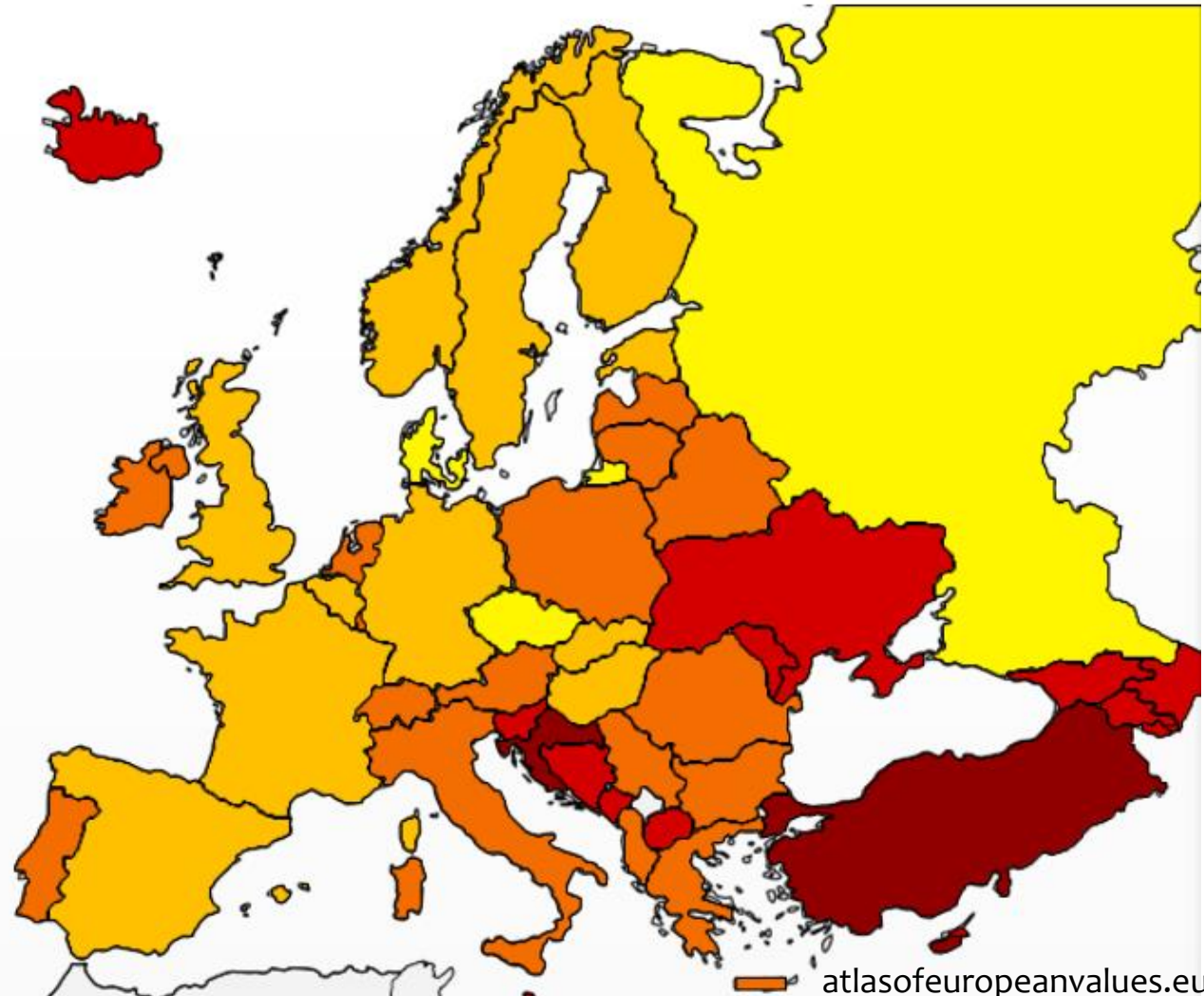| Question	Response
Please say, for each of the following, how important it is in your life. Religion	1 – very important/ 2 – quite important/3 – not important/4 - not at all important
Do you belong to a religious denomination?	1 – Yes/2 - No
Were you ever a member of a religious denomination?	1 – Yes/2 - No
Apart from weddings, funerals and christenings, about how often do you attend religious services these days?	1 – more than once week/ …/ 5 – once a year/6 – less often/7 – never, practically never
Apart from weddings, funerals and christenings, about how often did you attend religious services when you were 12 years old?	1 – more than once week/ …/ 5 – once a year/6 – less often/7 – never, practically never
Independently of whether you go to church or not, would you say you are …	1 – a religious person / 2 – not a religious person/ 3 – a convinced atheist
Please choose a number on the card to describe how true this statement is for you? I have my own way of connecting with the Divine without churches or religious services	1 – not at all/…/5 – very much
Whether or not you think of yourself as a religious person, how spiritual would you say you are, that is how strongly are you interested in the sacred or the supernatural?	1 – very interested/ 2 – somewhat interested/ 3 – not very interested/ 4 – not at all interested
And how important is God in your life? Please use this card to indicate - 10 means very important and 1 means not at all important	1 – 10
Do you find that you get comfort and strength from religion or not?	1 – Yes/2 – No
Do you take some moments of prayer, meditation or contemplation or something like that?	1 – Yes/2 – No
How often do you pray to God outside of religious services?	1 – every day/ …./5 – several times a year/6 – less often/7 – never
How much do you agree or disagree with each of the following: Politicians who do not believe in God are unfit for public office Religious leaders should not influence government decisions	1 – agree strongly/2 – agree/3 – neither agree or disagree/4 – disagree/5 – disagree strongly

Religiosity (EVS)

Independently of whether you go to church or not, would you say you are a religious person (%)

85 - 97
72 - 84
59 - 71
46 - 58
32 - 45
No data

atlasofeuropeanvalues.eu

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Spirituality

Whether or not you think of yourself as a religious person, how spiritual would you say you are? (% very or somewhat interested)

■	72 - 81
■	62 - 71
■	52 - 61
■	42 - 51
■	32 - 41
□	No data

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Methods

- Principal Components Analysis (Polychoric)
  - Reduce dimensionality of the data
  - Polychoric as responses nominal, binary or ordinal
  - Calculate religiosity component score for each person
    - main component loadings x question responses
- SRH and components of religiosity
  - Ordinal regression models adjusted for age and sex
- HLE – Sullivan method
  - Contribution of religiosity and spirituality to HLE variation between countries - Meta regression

EVS study characteristics

- 47 countries (- Kosovo, Northern Cyprus)
- 20 – 108 years
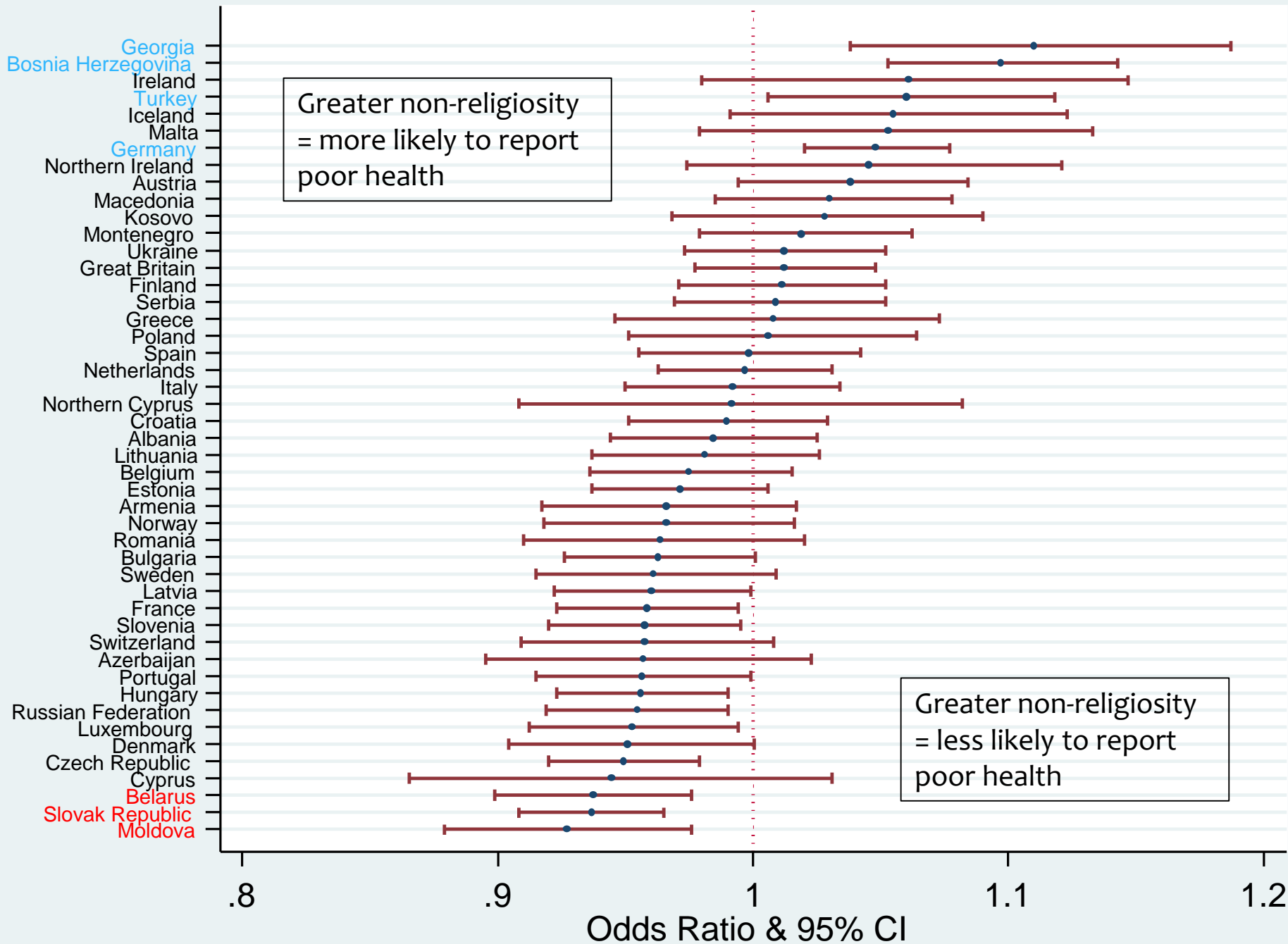- 99.2% complete data on religiosity and spirituality
- N=64,797 (44.4% male)

	Reporting of fair / poor / very poor health
Overall	**40%**
Women vs men	**OR*= 1.35 (95% CI 1.31-1.39)**
50+ vs <50 years	**OR*= 3.52 (95% 3.1-3.64)**

*compared to very good/good health

PCA Results

- 4 component model
  - 1st – *importance of religion v statement of beliefs*
  - 2nd – *belief church provides answers to spiritual and everyday problems*
  - 3rd – *belonging to religious denomination and importance of religious services for life events*
  - 4th - *religious attendance and belief in an afterlife*
- Described 68% of variance (1st component 53%)
- Results rotated for clearer pattern in component loadings
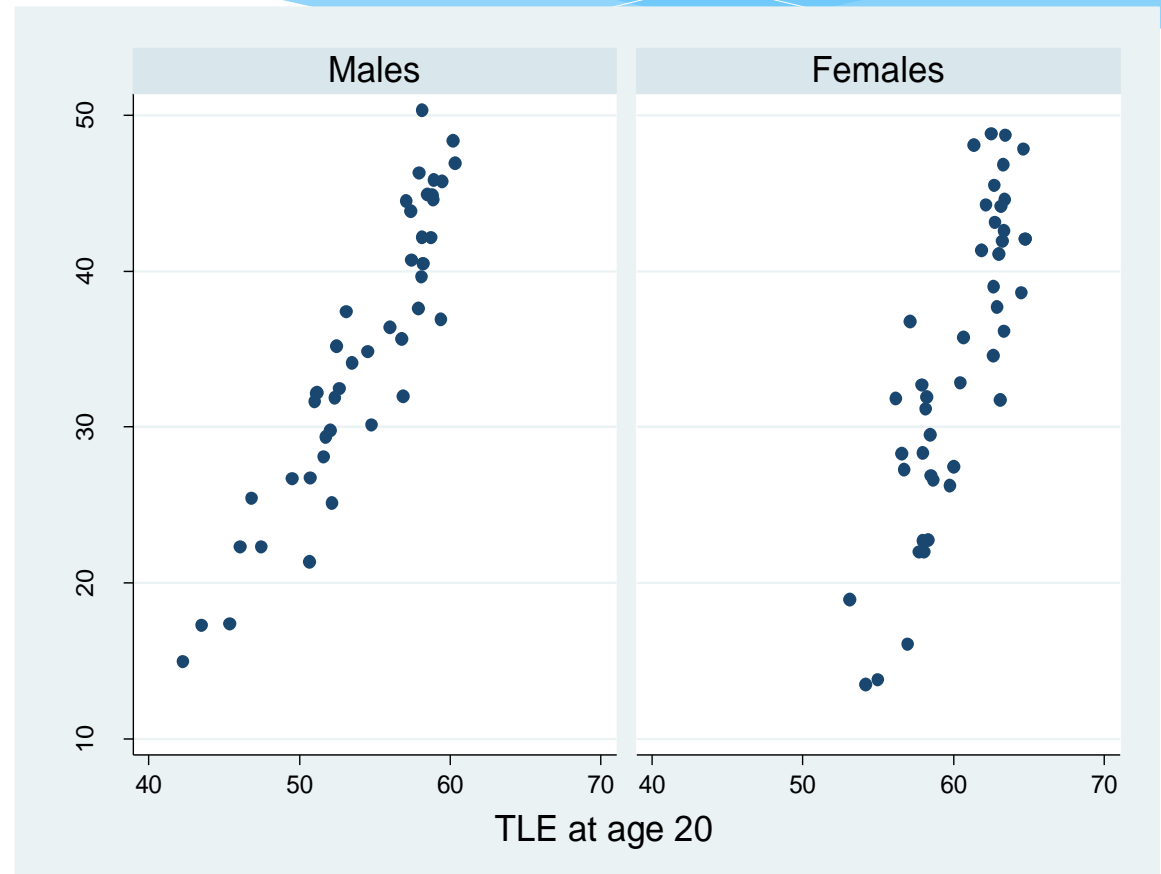- For all components increasing score – less religious/spiritual

	Component			
	1	2	3	4
how important in your life: religion (Q1F)	.219	-.020	-.048	.117
do you belong to a religious denomination (Q23)	.150	.036	-.289	.094
did you belong to a religious denomination (Q24)	.093	-.040	.547	.114
how often attend religious services (Q25)	.218	-.012	-.052	.246
how often attend religious services 12 years old (Q26)	.261	.119	.117	.403
how important to hold religious service: birth (Q27A)	-.034	.023	.399	-.048
how important to hold religious service: marriage (Q27B)	-.085	.024	.345	-.089
how important to hold religious service: death (Q27C)	-.094	.027	.329	-.037
are you a religious person (Q28)	.213	.013	-.129	-.010
church answers to: moral problems (Q29A)	.005	.474	.025	.031
church answers to: family life problems (Q29B)	-.011	.487	-.025	-.001
church answers to: spiritual needs (Q29C)	.001	.432	.029	.023
church answers to: social problems (Q29D)	-.006	.478	-.050	-.024
do you believe in: God (Q30A)	-.240	-.022	.119	.047
do you believe in: life after death (Q30B)	-.272	.016	-.175	.212
do you believe in: hell (Q30C)	-.235	.081	-.073	.076
do you believe in: heaven (Q30D)	-.250	.056	-.066	.075
do you believe in: sin (Q30E)	-.215	.078	-.028	.064
do you believe in: re-incarnation (Q31)	-.127	-.027	-.150	.550
statement of beliefs (Q32)	.233	.010	-.022	.012
own way of connecting with the divine (Q33)	-.156	-.231	.052	.232
how spiritual are you (Q34)	.235	.019	.130	-.134
your view on religions (Q35)	.170	-.043	-.087	.028
how important is God in your life (Q36 reverse coded)	.230	.021	-.035	.005
do you get comfort and strength from religion (Q37)	.226	-.045	-.068	-.023
do you take moment of prayer/meditation (Q38)	.268	.001	.074	-.012
how often do you pray to God outside religious services (Q39)	.281	.024	.031	.069
believe in lucky charm for protection (Q40)	.049	-.001	.222	.517
opinion: politicians unfit to hold office if don't believe in God (Q41A)	.081	-.092	-.131	-.108
opinion: religious leaders should not influence government decisions (Q41B)	-.010	.128	.061	-.054

Greater non-religiosity = more likely to report poor health

Greater non-religiosity = less likely to report poor health

Odds Ratio & 95% CI

Odds ratio of reporting poorer health for a one unit increase in component score 1

Countries (top to bottom): Georgia, Bosnia Herzegovina, Ireland, Turkey, Iceland, Malta, Germany, Northern Ireland, Austria, Macedonia, Kosovo, Montenegro, Ukraine, Great Britain, Finland, Serbia, Greece, Poland, Spain, Netherlands, Italy, Northern Cyprus, Croatia, Albania, Lithuania, Belgium, Estonia, Armenia, Norway, Romania, Bulgaria, Sweden, Latvia, France, Slovenia, Switzerland, Azerbaijan, Portugal, Hungary, Russian Federation, Luxembourg, Denmark, Czech Republic, Cyprus, Belarus, Slovak Republic, Moldova

Meta regression results 1
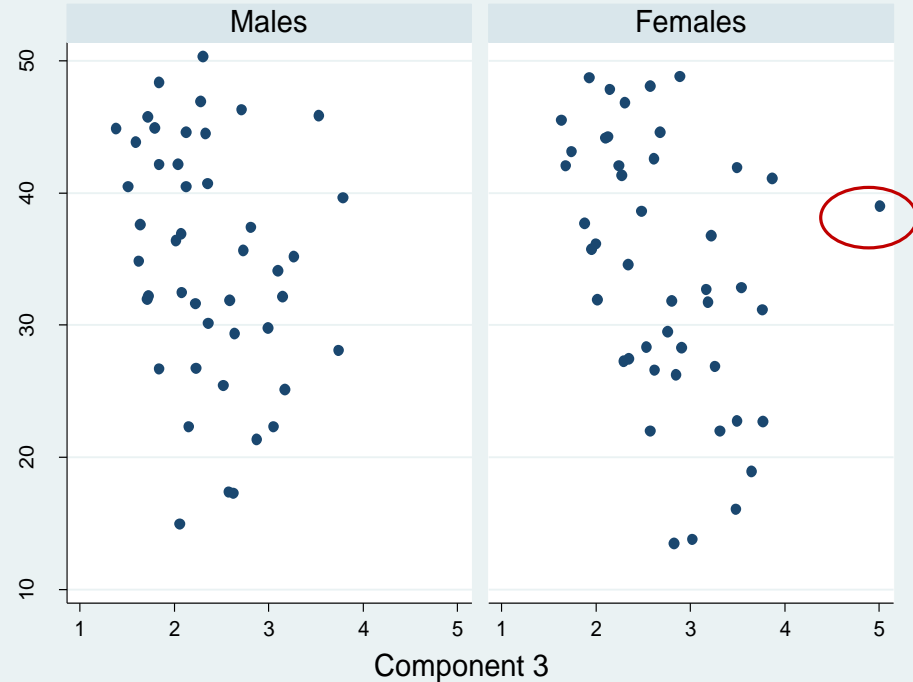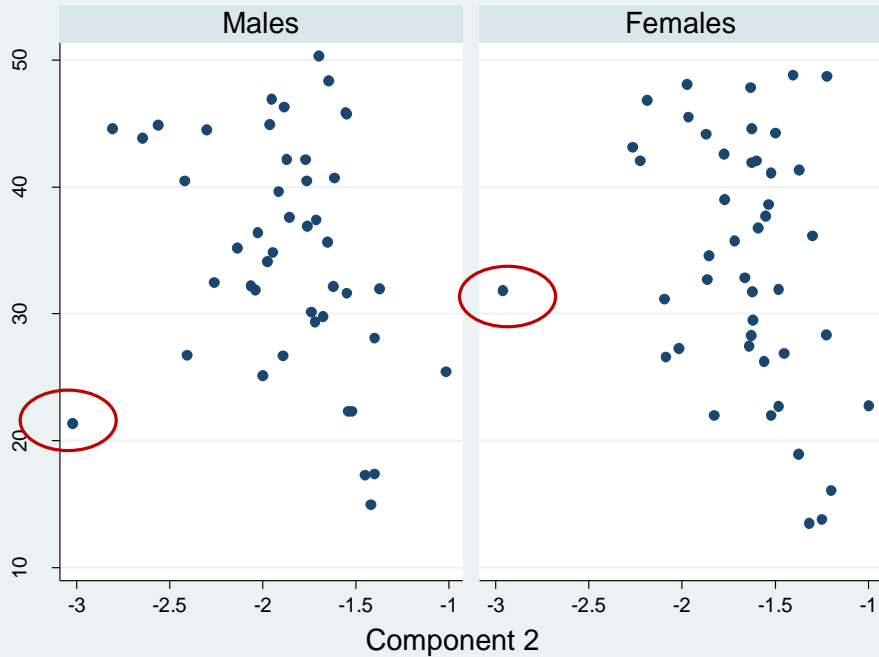
* Meta-regression
* HLE at age 20 (healthy=very good + good health)
* Mean of each component score for each country

Meta regression results 2

Component		Coeff (95% CI)	P-value
1 (*importance of religion v beliefs*)	M	-1.22 (-6.52 to 4.08)	0.6
	F	- .859 (-8.58 to 6.86)	0.8
2 (*church provides answers to spiritual and everyday probs*)	M	-7.41 (-14.14 to -.669)	0.03
	F	-9.39 (-18.01 to -.760)	0.03
3 (*belong to religious denomination/ importance of religious services*	M	-3.67 (-8.26 to .922)	0.10
	F	-5.43 (-9.40 to -1.46) .	0.009
4 (*religious attendance and belief in an afterlife*)	M	-2.75 (-10.05 to 4.54)	0.4
	F	-4.56 (-13.20 to 4.09)	0.2

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Meta regression results 3

Conclusions

- Wide variability in religiosity and spirituality across Europe
- PCA found 4 main components broadly assessing: (1) importance of religion in life, (2) whether the church addresses everyday issues, (3) belonging to religious denomination, and (4) religious attendance
- Components 2 and 3 (women only) significantly explained some of the variation in HLE at age 20 across 45 countries
- More negative scores (greater religiosity) – higher HLE20