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Impact of the COVID-19 Pandemic on Religiosity: Evidence from Germany

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Online Appendix

Data and Methods

The data used in this study is drawn from a rolling cross-sectional online survey conducted in Germany. The survey was funded by the Migration and Diversity research department at the WZB Berlin Social Science Center. Bamberg Center for Empirical Studies (BACES) was commissioned to conduct the fieldwork. The data collection began in April 2020 and ended in September 2020. BACES recruited a total number of 7553 respondents across 13 waves from the online Access Panel *respondi*. The survey project has received ethics approval by the WZB Research Ethics Committee (2020/0/88). The following quotas were used to ensure that different sociodemographic, ethnic, and denominational groups were represented adequately in the sample:

Appendix Table S1 Sampling quotas

Gender	
Male	50%
Female	50%
Age	
18-29	20%
30-39	18%
40-49	19%
50-59	24%
60-69	18%
Education	
Low-level education	30%
Mid-level education	34%
High-level education	36%

Between 550-700 persons were interviewed per wave. **Fehler! Verweisquelle konnte nicht gefunden werden.** lists the start and end of the field phase of the respective waves and the number of persons interviewed per wave.

Appendix Table S2 Survey waves and period of fieldwork

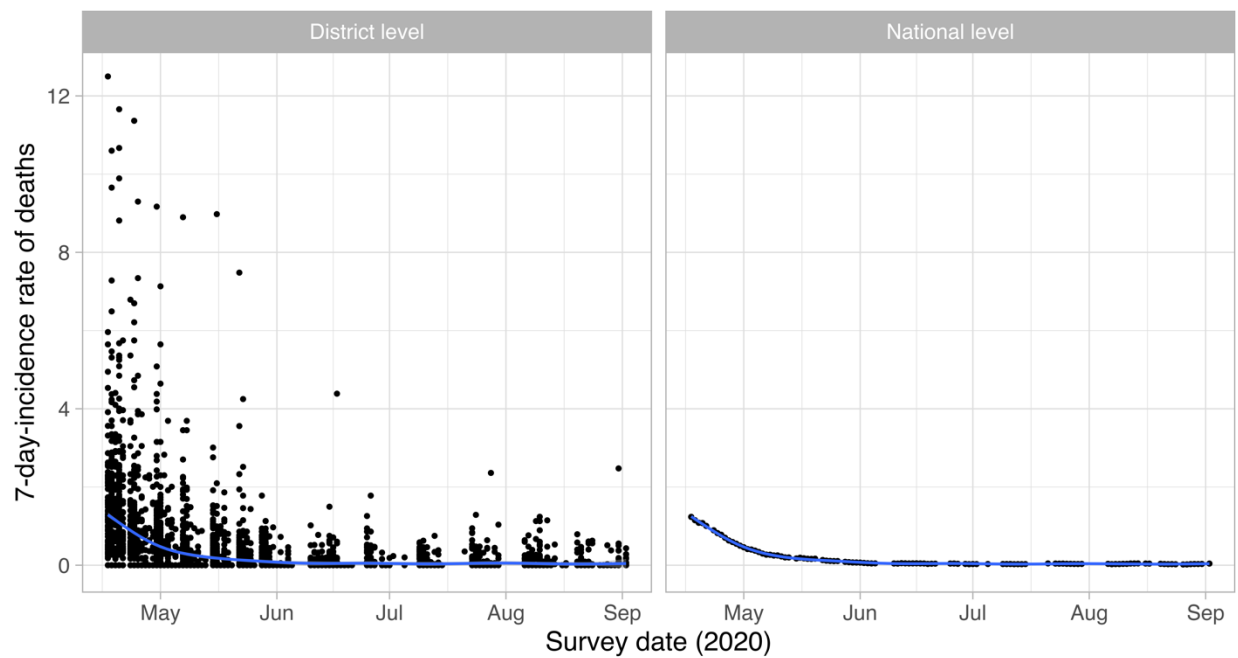
Wave	Begin of fieldwork	End of fieldwork	N
1	17.04.20	21.04.20	708
2	23.04.20	29.04.20	558
3	30.04.20	06.05.20	563
4	06.05.20	12.05.20	561
5	13.05.20	20.05.20	568
6	22.05.20	26.05.20	574

7	28.05.20	05.06.20	583
8	10.06.20	21.06.20	555
9	25.06.20	05.07.20	561
10	09.07.20	15.07.20	553
11	23.07.20	30.07.20	563
12	06.08.20	17.08.20	561
13	20.08.20	02.09.20	645

Appendix Table S3 Number of respondents per district

	Mean	Standard deviation	Minimum	Maximum
Number of respondents per district	18.7	26.5	1	365

Appendix Figure S1 Figure 3 7-day-incidence rate of infections on the district level and on the national level in 2020



Appendix Table S 4 Summary statistics of numerical variables

Numerical variables	N	Min.	Max.	Mean	SD	N.A.
Prayer frequency (1 = Never, 5 = Several times a day)	7495	1	5	1.80	1.12	22
Importance of religion (1 = Not important, 4 = Very important)	7495	1	4	1.86	0.97	14
Life in hands of God (1 = Never, 4 = Always)	7495	1	4	1.69	0.94	21
Age	7495	20	101	47.35	14.74	0
Worry about own health (1 = Not worried at all, 5 = Very worried)	7486	1	5	2.60	1.12	9
Worry about family's health (1 = Not worried at all, 5 = Very worried)	7483	1	5	3.04	1.15	12
Own health assessment (1 = Very good, 4 = Bad)	7488	1	4	2.23	0.77	7
Population density of district in 2017	7481	36	4686	1080.78	1211.12	14
Average household income in district in 2016	7481	16203	34987	21826.47	2621.64	14
Unemployment rate in district in 2019	7481	2	13	5.62	2.22	14
Share of population of 75 in district in 2017	7481	8	17	11.31	1.58	14
Share of Catholics in district in 2011	7448	2	89	29.88	21.74	47
Share of women in district in 2019	7481	49	52	50.70	0.59	14

Note: N.A. = Not available, i.e., missing cases.

Appendix Table S 5 Summary statistics for categorical and dummy variables

Variables	N	Share	Valid share
<i>Religion</i>			
Religion: Christian	3903	52.1%	52.1%
Religion: Islam	211	2.8%	2.8%
Religion: Jewish	41	0.5%	0.5%
Religion: None	3227	43.1%	43.1%
Religion: Other	106	1.4%	1.4%
Religion: N.A.	7	0.1%	-
<i>Religious denomination</i>			
Denomination: Roman Catholic	1963	26.2%	50.6%
Denomination: Protestant	1467	19.6%	37.8%
Denomination: Other	452	6.0%	11.6%
Denomination: None/N.A.	3613	48.2%	-
<i>Gender</i>			
Gender: Female (0)	3771	50.3%	50.3%
Gender: Male (1)	3724	49.7%	49.7%
<i>Children</i>			
Children: None (0)	3591	47.9%	47.9%
Children: at least one (1)	3904	52.1%	52.1%
<i>Worry about colleague's job</i>			
Worry about colleagues' job: Lay off unlikely (0)	6208	82.8%	85.7%
Worry about colleagues' job: Lay off very likely (1)	1035	13.8%	14.3%
Worry about colleagues' job: N.A.	252	3.4%	-
<i>Tested positive for Covid-19</i>			
Tested positive for Covid-19: No	6470	86.3%	86.3%
Tested positive for Covid -19: self	77	1.0%	1.0%
Tested positive for Covid -19: family	140	1.9%	1.9%
Tested positive for Covid -19: friends	250	3.3%	3.3%
Tested positive for Covid -19: colleagues	212	2.8%	2.8%
Tested positive for Covid -19: neighbors	346	4.6%	4.6%
<i>Level of education</i>			
Education: No school degree	114	1.5%	1.5%
Education: Lower secondary education	2001	26.7%	26.7%
Education: Secondary education	2555	34.1%	34.1%
Education: Abitur	2825	37.7%	37.7%
<i>Worry about own job</i>			
Worry about own job: Lay off unlikely (0)	6124	81.7%	83.9%
Worry about own job: Lay off very likely (1)	1174	15.7%	16.1%
Worry about own job: N.A.	197	2.6%	-
<i>Illnesses</i>			
Illnesses: None (0)	4724	63.0%	63.2%
Illnesses: At least one (1)	2754.	36.7%	36.8%

Illnesses: N.A.	17	0.2%	-
<i>Net household income</i>			
Income: Less than 750	555	7.4%	7.4%
Income: 750-1500	1426	19.0%	19.1%
Income: 1500-2500	1854	24.7%	24.9%
Income: 2500-4000	2219	29.6%	29.8%
Income: 4000-6000	1016	13.6%	13.6%
Income: More than 6000	388	5.2%	5.2%
Income: N.A.	37	0.5%	-
<i>Employment status</i>			
Employment status: Employed	4750	63.4%	63.4%
Employment status: Unemployed	446	6.0%	6.0%
Employment status: Not in labor force	2299	30.7%	30.7%

Note: N.A. = Not available, i.e., missing cases.

Survey questions and answer categories

How often do you pray?

- Several times a day
- Daily
- Weekly
- Rarely
- Never

How important is religion in your life?

- Very important
- Fairly important
- Not that important
- Not important at all

How often have you recently felt that your life in God's hands?

- Constantly
- Often
- Rarely
- Never

How concerned are you that a coronavirus infection would cause you to develop a life-threatening illness?

- Not worried at all
- Hardly worried
- A little worried
- Quite worried
- Very worried

How concerned are you that a coronavirus infection would cause a member of your immediate family (partner, children, parents, siblings, grandparents, grandchildren) to develop a life-threatening illness?

- Not worried at all
- Hardly worried
- A little worried
- Quite worried
- Very worried

Are there people in your environment who have been infected by the coronavirus, which has been confirmed by a positive test result? (Multiple answers possible!)

- No
- I, myself
- A member of my immediate family (partner, children, parents, siblings, grandparents, grandchildren)
- A member of my close circle of friends (with whom you have contact at least once a month (also online or by phone))
- One of your close work colleagues or classmates (with whom you have a conversation at least once a week)
- Someone in your neighborhood (places you can walk to in 10 min)

How likely do you think it is that you will be fired from your company?

- 0, very unlikely – 10, very likely

How likely do you think it is that there will be layoffs in your company in general?

- 0, very unlikely – 10, very likely

Please state your year of birth:

Please state your gender:

- Male
- Female
- Diverse

Please state your highest level of educational attainment

- School finished without a degree
- Lower secondary school certificate
- Secondary school certificate/intermediate school leaving certificate
- High school diploma (*Abitur*)
- Still in school

If you think back to the time before the Coronavirus crisis, i.e., before March 1st, 2020, how high was the net income that was available to your household per month? We mean the sum of all sources of income for all members of your household.

- Less than 750 Euro
- 750 – 1500 Euro
- 1500 – 2500 Euro
- 2500 – 4000 Euro
- 4000 – 6000 Euro
- More than 6000 Euro

If you think back to the time before the start of the Coronavirus crisis, i.e. directly before March 1, 2020, were you gainfully employed at the time?

- Yes, as an employee or civil servant
- Yes, as an employee in the private sector
- Yes, as a self-employed person
- No, in training or school
- No, looking for a job
- No, not looking for a job (household, care, pension, etc.)

Do you have any children?

- No
- Yes, 1 child
- Yes, 2 children
- Yes, 3 children
- Yes, 4 children or more

How is your general state of health?

- Bad
- Mediocre
- Good

- Very good

How many of the following illnesses do you have? (Diabetes, high blood pressure, Hepatitis B, chronic lung diseases, chronic liver disease)

- None
- 1
- 2
- 3 or more

What religion do you belong to?

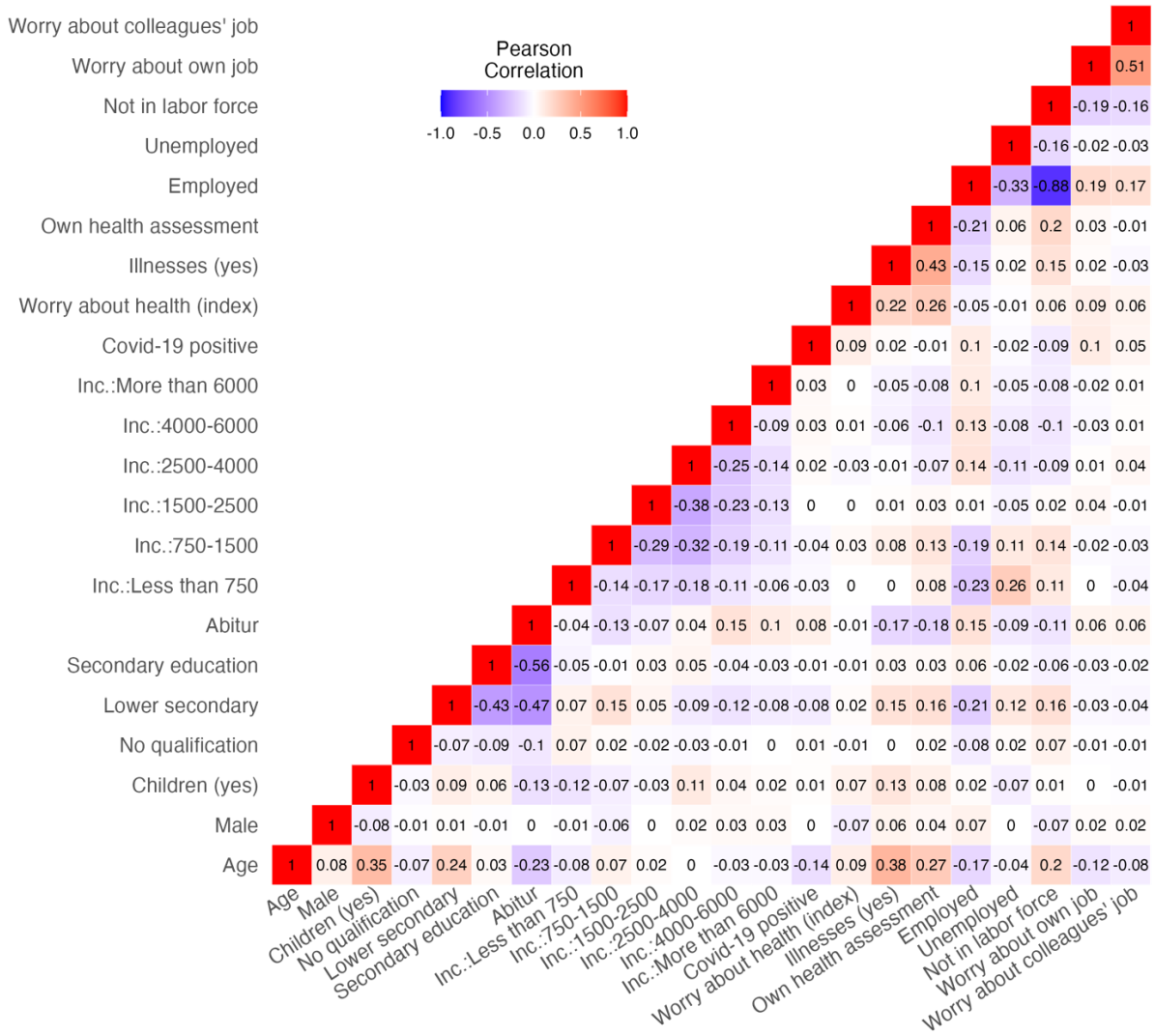
- Christianity
- Islam
- Judaism
- None
- Another, namely:

Which denomination of Christianity do you belong to?

- Roman Catholic
- Protestant
- Greek Orthodox
- Russian Orthodox
- Another, namely:

Summary statistics

Appendix Figure S2 Correlation matrix



Full regression models

Appendix Table S6 OLS regression results of the impact of the national 7-day-incidence rate on religiosity

	<i>Dependent variable:</i>			
	Religiosity (index)	Prayer	Fatefulness	Importance
7-day-incidence	-0.01 (0.02)	-0.02 (0.02)	0.00 (0.02)	0.00 (0.02)
Agex10	-0.00*** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)
Age2	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)	0.00*** (0.00)
Male	-0.03 (0.02)	-0.04 (0.02)	-0.03 (0.02)	-0.02 (0.02)
Education (ref.: None)				
Education: Lower secondary	0.05 (0.07)	0.08 (0.10)	0.05 (0.08)	0.02 (0.08)
Education: Secondary	0.11 (0.07)	0.17 (0.09)	0.09 (0.08)	0.08 (0.08)
Education: Abitur	0.15* (0.07)	0.25** (0.09)	0.09 (0.08)	0.13 (0.08)
Income:750-1500	-0.03 (0.04)	-0.03 (0.05)	-0.05 (0.04)	-0.01 (0.04)
Income:1500-2500	-0.04 (0.04)	-0.03 (0.05)	-0.08 (0.04)	-0.01 (0.04)
Income:2500-4000	-0.06 (0.04)	-0.07 (0.05)	-0.08 (0.04)	-0.03 (0.04)
Income:4000-6000	-0.06 (0.04)	-0.04 (0.06)	-0.12* (0.05)	-0.04 (0.05)
Income: more than 6000	0.03 (0.05)	0.07 (0.07)	-0.02 (0.06)	0.05 (0.06)
Employment status (ref.: Employed)				
Employment status: Unemployed	0.04 (0.04)	0.02 (0.05)	0.04 (0.04)	0.07 (0.04)
Employment status: Not in labor force	-0.08*** (0.02)	-0.11*** (0.03)	-0.09*** (0.02)	-0.06* (0.02)
Children (yes)	0.06** (0.02)	0.05* (0.02)	0.05* (0.02)	0.08*** (0.02)
Illness (yes)	0.08*** (0.02)	0.09*** (0.03)	0.10*** (0.02)	0.06** (0.02)
Health assessment	0.01 (0.01)	0.01 (0.02)	0.02 (0.01)	0.01 (0.01)
Waves (ref.: Wave 1)				
Wave: 2	-0.06 (0.08)	-0.09 (0.10)	-0.10 (0.08)	-0.01 (0.08)
Wave: 3	-0.13 (0.15)	-0.24 (0.20)	-0.11 (0.17)	-0.04 (0.16)
Wave: 4	-0.18 (0.20)	-0.33 (0.26)	-0.15 (0.22)	-0.07 (0.21)
Wave: 5	-0.14 (0.23)	-0.35 (0.29)	-0.11 (0.25)	-0.00 (0.24)
Wave: 6	-0.18 (0.25)	-0.40 (0.32)	-0.12 (0.27)	-0.05 (0.26)
Wave: 7	-0.09 (0.26)	-0.28 (0.34)	-0.04 (0.28)	0.01 (0.28)
Wave: 8	-0.18 (0.28)	-0.41 (0.36)	-0.14 (0.30)	-0.03 (0.29)
Wave: 9	-0.14 (0.27)	-0.36 (0.34)	-0.07 (0.29)	-0.02 (0.28)
Wave: 10	-0.18 (0.28)	-0.41 (0.36)	-0.12 (0.30)	-0.04 (0.29)
Wave: 11	-0.09 (0.25)	-0.27 (0.32)	-0.05 (0.27)	0.01 (0.26)
Wave: 12	-0.14 (0.21)	-0.29 (0.27)	-0.11 (0.23)	-0.04 (0.22)
Wave: 13	-0.15 (0.15)	-0.30 (0.20)	-0.12 (0.17)	-0.06 (0.16)
West Germany (dummy)	-0.02 (0.03)	0.02 (0.03)	-0.01 (0.03)	-0.06* (0.03)
Religion (ref.: Christian)				
Religion: Muslim	1.17*** (0.05)	1.25*** (0.07)	1.22*** (0.06)	1.08*** (0.06)

Religion: Jewish	0.67*** (0.12)	0.77*** (0.15)	0.81*** (0.13)	0.46*** (0.13)
Religion: None	-0.90*** (0.02)	-0.95*** (0.02)	-0.77*** (0.02)	-1.00*** (0.02)
Religion: Other	0.18* (0.07)	0.25* (0.10)	0.05 (0.08)	0.27*** (0.08)
Observations	7,415	7,415	7,415	7,415
R ²	0.33	0.26	0.25	0.33
Adjusted R ²	0.33	0.25	0.25	0.33

*Note: Standard errors in parentheses. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$*

Appendix Table S7 Effect of the district level 7-day-incidence rate on religiosity

	<i>Dependent variable:</i>			
	Religiosity (index)	Prayer	Fatefulness	Importance
Intercept	0.73 (0.13)***	2.44 (0.17)***	2.50 (0.14)***	2.60 (0.14)***
7-day-incidence rate (district)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)
Age x 10	-0.00 (0.00)***	-0.00 (0.00)***	-0.00 (0.00)***	-0.00 (0.00)***
Age ²	0.00 (0.00)***	0.00 (0.00)***	0.00 (0.00)***	0.00 (0.00)***
Male	-0.03 (0.02)	-0.04 (0.02)	-0.03 (0.02)	-0.02 (0.02)
Education (ref.: None)				
Education: Lower secondary	0.05 (0.07)	0.08 (0.09)	0.05 (0.08)	0.03 (0.08)
Education: Secondary	0.12 (0.07)	0.17 (0.09)	0.10 (0.08)	0.09 (0.08)
Education: Abitur	0.15 (0.07)*	0.25 (0.09)**	0.08 (0.08)	0.13 (0.08)
Income (ref.: less than 750 Euro)				
Income: 750-1500 Euro	-0.04 (0.04)	-0.05 (0.05)	-0.05 (0.04)	-0.02 (0.04)
Income: 1500-2500 Euro	-0.04 (0.04)	-0.04 (0.05)	-0.08 (0.04)	-0.01 (0.04)
Income: 2500-4000 Euro	-0.06 (0.04)	-0.08 (0.05)	-0.08 (0.04)	-0.03 (0.04)
Income: 4000-6000 Euro	-0.07 (0.04)	-0.05 (0.06)	-0.12 (0.05)*	-0.04 (0.05)
Income: more than 6000 Euro	0.02 (0.05)	0.05 (0.07)	-0.02 (0.06)	0.04 (0.06)
Employment status (ref.: Employed)				
Employment status: Unemployed	0.05 (0.04)	0.03 (0.05)	0.04 (0.04)	0.07 (0.04)
Employment status: Not in labor force	-0.08 (0.02)***	-0.10 (0.03)***	-0.08 (0.02)***	-0.06 (0.02)*
Children (yes)	0.07 (0.02)***	0.06 (0.02)*	0.06 (0.02)**	0.09 (0.02)***
Illness (yes)	0.09 (0.02)***	0.10 (0.03)***	0.10 (0.02)***	0.06 (0.02)**
Health assessment	0.01 (0.01)	0.01 (0.02)	0.02 (0.01)	0.01 (0.01)
Waves (ref.: Wave 1)				
Wave: 2	-0.06 (0.05)	-0.03 (0.06)	-0.10 (0.05)*	-0.03 (0.05)
Wave: 3	-0.08 (0.05)	-0.07 (0.06)	-0.11 (0.05)*	-0.05 (0.05)
Wave: 4	-0.12 (0.05)*	-0.11 (0.06)	-0.15 (0.05)**	-0.09 (0.05)
Wave: 5	-0.07 (0.05)	-0.08 (0.06)	-0.11 (0.05)*	-0.01 (0.05)
Wave: 6	-0.10 (0.05)*	-0.12 (0.06)	-0.13 (0.05)*	-0.07 (0.05)
Wave: 7	-0.01 (0.05)	0.01 (0.06)	-0.04 (0.05)	-0.01 (0.05)
Wave: 8	-0.10 (0.05)*	-0.09 (0.06)	-0.14 (0.05)**	-0.05 (0.05)
Wave: 9	-0.06 (0.05)	-0.05 (0.06)	-0.07 (0.05)	-0.04 (0.05)
Wave: 10	-0.10 (0.05)*	-0.10 (0.06)	-0.12 (0.05)*	-0.07 (0.05)
Wave: 11	-0.01 (0.05)	0.02 (0.06)	-0.05 (0.05)	-0.00 (0.05)
Wave: 12	-0.08 (0.05)	-0.05 (0.06)	-0.12 (0.05)*	-0.06 (0.05)
Wave: 13	-0.11 (0.04)*	-0.14 (0.06)*	-0.13 (0.05)**	-0.08 (0.05)
West Germany (dummy)	-0.09 (0.04)*	-0.06 (0.05)	-0.06 (0.04)	-0.14 (0.04)**
Religion (ref.: Christian)				
Religion: Muslim	1.17 (0.05)***	1.25 (0.07)***	1.22 (0.06)***	1.08 (0.06)***
Religion: Jewish	0.65 (0.12)***	0.76 (0.15)***	0.79 (0.13)***	0.43 (0.13)***
Religion: None	-0.90 (0.02)***	-0.94 (0.02)***	-0.77 (0.02)***	-1.00 (0.02)***
Religion: Other	0.18 (0.07)*	0.25 (0.10)**	0.05 (0.08)	0.27 (0.08)***
Population density	0.05 (0.02)**	0.07 (0.02)***	0.04 (0.02)*	0.05 (0.02)**
Household income	0.01 (0.01)	0.00 (0.02)	0.01 (0.02)	0.01 (0.02)
Unemployment rate	-0.04 (0.02)*	-0.06 (0.02)**	-0.04 (0.02)*	-0.03 (0.02)
Share of pop over 75	0.01 (0.02)	0.02 (0.02)	0.01 (0.02)	0.00 (0.02)

Share of Catholics	0.01 (0.01)	0.03 (0.01)*	0.01 (0.01)	0.01 (0.01)
Share female	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
AIC	17007.77	20668.55	18252.75	17782.37
BIC	17304.77	20965.54	18549.75	18079.36
Log Likelihood	-8460.89	-10291.27	-9083.38	-8848.19
Num. obs.	7382	7382	7382	7382
Num. groups: kreis	399	399	399	399
Var: kreis (Intercept)	0.00	0.00	0.00	0.00
Var: Residual	0.56	0.93	0.67	0.62

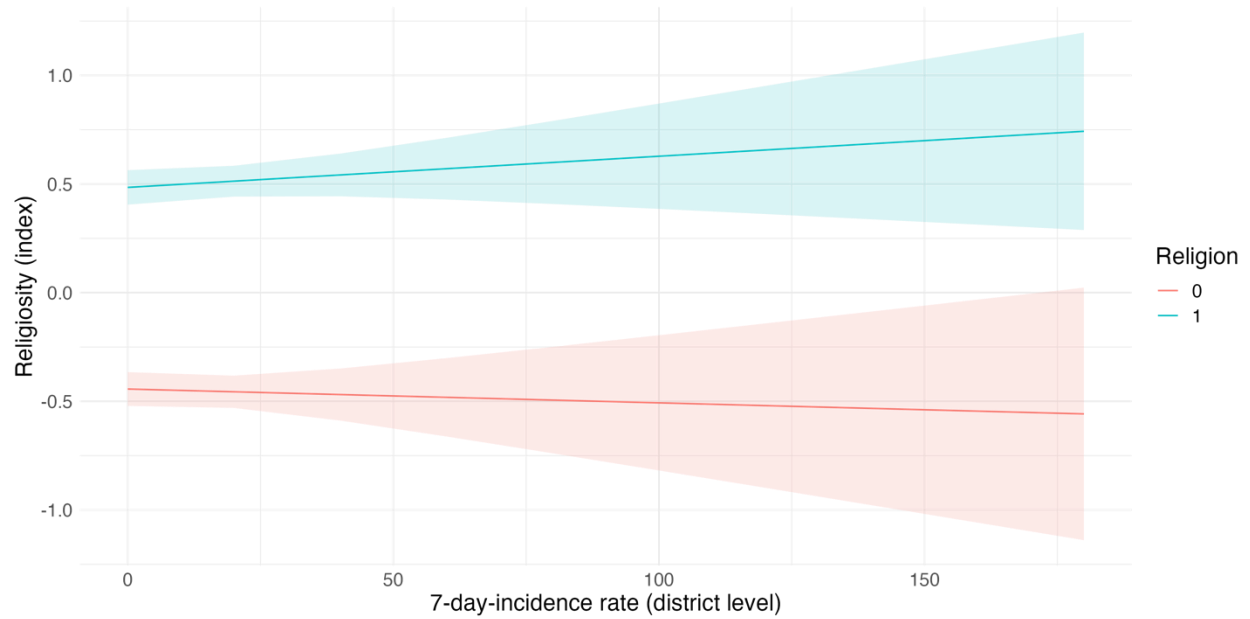
*Note: Multilevel linear mixed-effects regression. Standard errors in parentheses. * p<0.05; ** p<0.01; *** p<0.001*

Appendix Table S 8 Effect of district level 7-day-incidence on religiosity conditional on religion

	<i>Dependent variable:</i>
	Religiosity (index)
7-day-incidence	-0.00 (0.00)
Religion (dummy)	0.92 (0.03) ^{***}
Age*10	-0.00 (0.00) ^{***}
Age2	0.00 (0.00) ^{***}
Male	-0.01 (0.02)
Education:Lower secondary (ref.: None)	0.01 (0.08)
Education:Secondary	0.07 (0.08)
Education:Abitur	0.11 (0.08)
Income:750-1500 (ref.: -750 Euro)	-0.03 (0.04)
Income:1500-2500 Euro	-0.04 (0.04)
Income:2500-4000 Euro	-0.07 (0.04)
Income:4000-6000 Euro	-0.09 (0.04) [*]
Income:+6000 Euro	0.00 (0.06)
Employment status: Unemployed (ref.: Employed)	0.05 (0.04)
Employment status: Not in labor force	-0.08 (0.02) ^{***}
Children (yes)	0.10 (0.02) ^{***}
Illness (yes)	0.09 (0.02) ^{***}
Health assessment	0.01 (0.01)
Wave: 2 (ref.: Wave 1)	-0.07 (0.05)
Wave: 3	-0.08 (0.05)
Wave: 4	-0.13 (0.05) ^{**}
Wave: 5	-0.09 (0.05)
Wave: 6	-0.12 (0.05) [*]
Wave: 7	-0.02 (0.05)
Wave: 8	-0.11 (0.05) [*]
Wave: 9	-0.05 (0.05)
Wave: 10	-0.11 (0.05) [*]
Wave: 11	-0.02 (0.05)
Wave: 12	-0.08 (0.05)
Wave: 13	-0.12 (0.04) ^{**}
West Germany (dummy)	-0.04 (0.04)
Population density	0.04 (0.02) [*]
Household income	0.01 (0.02)
Unemployment rate	-0.03 (0.02)
Share of pop over 75	0.02 (0.02)
Share Catholic	0.02 (0.01)
Share female	-0.01 (0.01)
7-day-incidence x Religion (dummy)	0.00 (0.00)
AIC	17424.03
BIC	17721.02
Log Likelihood	-8669.01
Num. obs.	7382
Num. groups: kreis	399
Var: kreis (Intercept)	0.00
Var: Residual	0.58

Note: Multilevel linear mixed-effects regression. Standard errors in parentheses.
* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Appendix Figure S 3 Effect of the district level 7-day-incidence rate on the religiosity index conditional on whether the respondent belongs to any religion or not.



Appendix Table S 9 Effect of district level 7-day-incidence on religiosity conditional on religious denomination

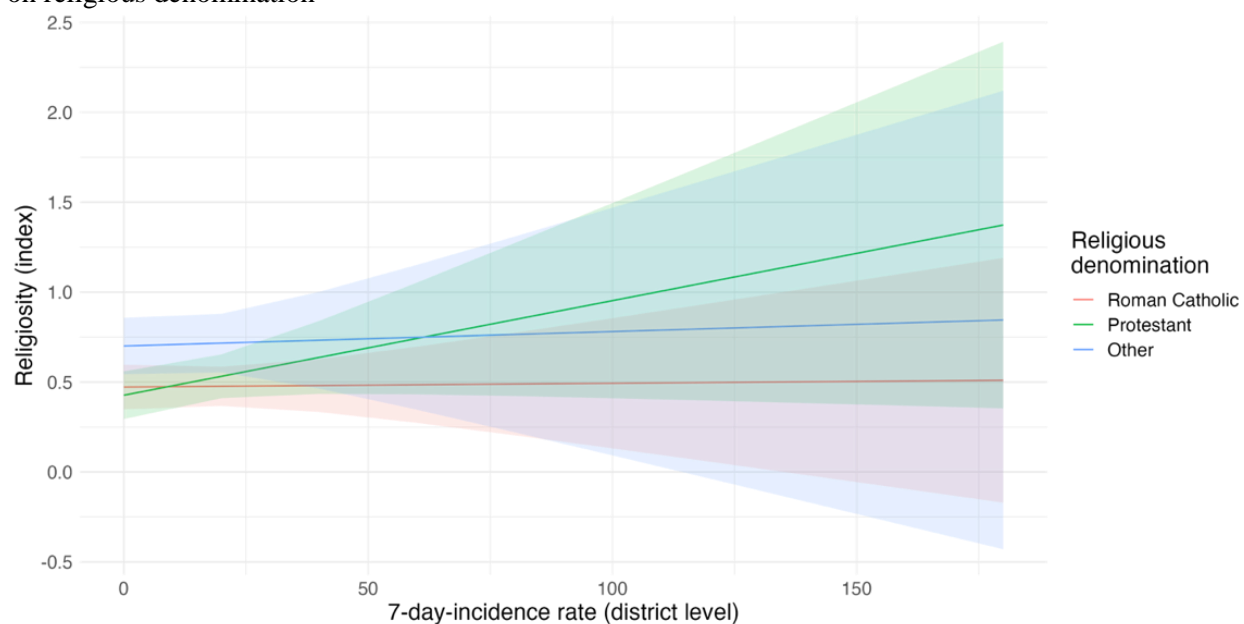
	<i>Dependent variable:</i>
	Religiosity (index)
7-day-incidence	-0.00 (0.00)
Denomination: Protestant	-0.06 (0.04)
Denomination: Other	0.23*** (0.06)
Age*10	-0.00** (0.00)
Age2	0.00*** (0.00)
Male	-0.02 (0.03)
Education:Lower secondary (ref.: None)	0.00 (0.12)
Education:Secondary	0.15 (0.12)
Education:Abitur	0.20 (0.12)
Income:750-1500 Euro (ref.: below 750 Euro)	-0.06 (0.07)
Income:1500-2500 Euro	-0.08 (0.07)
Income:2500-4000 Euro	-0.12 (0.07)
Income:4000-6000 Euro	-0.12 (0.07)
Income:+6000 Euro	0.04 (0.09)
Employment status: Unemployed (ref.: Employed)	0.07 (0.07)
Employment status: NA	-0.11** (0.04)
Children (yes)	0.08** (0.03)
Illness (yes)	0.14*** (0.04)
Health assessment	-0.01 (0.02)
Wave: 2 (ref.: Wave1)	-0.13 (0.07)
Wave: 3	-0.15* (0.07)
Wave: 4	-0.13 (0.08)
Wave: 5	-0.14 (0.08)
Wave: 6	-0.10 (0.08)
Wave: 7	-0.04 (0.08)
Wave: 8	-0.14 (0.08)
Wave: 9	-0.04 (0.08)
Wave: 10	-0.17* (0.08)
Wave: 11	-0.06 (0.08)
Wave: 12	-0.10 (0.08)
Wave: 13	-0.16* (0.07)
West Germany (dummy)	-0.41*** (0.08)
Population density	0.07* (0.03)
Household income	0.01 (0.03)
Unemployment rate	-0.07* (0.03)
Share of pop over 75	-0.00 (0.03)
Share Catholic	0.02 (0.02)
Share female	-0.01 (0.02)
7-day-incidence x Protestant	0.01 (0.00)

7-day-incidence x Other	0.00 (0.00)
Observations	3,820
Log Likelihood	-5,076.57
Akaike Inf. Crit.	10,249.15
Bayesian Inf. Crit.	10,549.05

Note: Multilevel linear mixed-effects regression. Standard errors in parentheses.

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

Appendix Figure S 4 Effect of the district level 7-day-incidence rate on the religiosity index conditional on religious denomination



Appendix Table S10 Effect of the national 7-day-death rate on religiosity

	<i>Dependent variable:</i>
	Religiosity (index)
7-day-death rate (national)	0.00 (0.00)
Age*10	-0.00*** (0.00)
Age2	0.00*** (0.00)
Male	-0.03 (0.02)
Education:Lower secondary (ref.: None)	0.05 (0.07)
Education:Secondary	0.11 (0.07)
Education:Abitur	0.15* (0.07)
Income:750-1500 Euro (ref.: below 750 Euro)	-0.03 (0.04)
Income:1500-2500	-0.04 (0.04)
Income:2500-4000	-0.06 (0.04)
Income:4000-6000	-0.06 (0.04)
Income:+6000	0.03 (0.05)
Employment status: Unemployed	0.04 (0.04)
Employment status: NA	-0.08*** (0.02)
Children (yes)	0.06** (0.02)
Illness (yes)	0.08*** (0.02)
Health assessment	0.01 (0.01)
Wave: 2 (ref.: Wave1)	-0.04 (0.05)
Wave: 3	-0.07 (0.05)
Wave: 4	-0.10* (0.05)
Wave: 5	-0.06 (0.05)
Wave: 6	-0.09 (0.05)
Wave: 7	0.00 (0.05)
Wave: 8	-0.08 (0.05)
Wave: 9	-0.04 (0.05)
Wave: 10	-0.08 (0.05)
Wave: 11	0.01 (0.05)
Wave: 12	-0.06 (0.05)
Wave: 13	-0.09* (0.05)
West Germany (dummy)	-0.02 (0.03)
Religion: Muslim (ref.: Christian)	1.17*** (0.05)
Religion: Jewish	0.67*** (0.12)
Religion: None	-0.90*** (0.02)
Religion: Other	0.18* (0.07)
Observations	7,415
R ²	0.33
Adjusted R ²	0.33

Note: OLS regression. Standard errors in parentheses.

* p<0.05; ** p<0.01; *** p<0.001

Appendix Table S11 Effect of the district-level 7-day-death rate on religiosity

	<i>Dependent variable:</i>
	Religiosity (index)
7-day-deaths (district)	-0.00 (0.00)
Age*10	-0.06 (0.04)
Age2	0.23 (0.06)***
Male	-0.00 (0.00)**
Education:Lower secondary (ref.: None)	0.00 (0.00)***
Education:Secondary	-0.02 (0.03)
Education:Abitur	0.00 (0.12)
Income:750-1500 Euro(ref.: below 750 Euro)	0.15 (0.12)
Income:1500-2500 Euro	0.20 (0.12)
Income:2500-4000 Euro	-0.06 (0.07)
Income:4000-6000 Euro	-0.08 (0.07)
Income:+6000 Euro	-0.12 (0.07)
Employment status: Unemployed (ref.: Employed)	-0.12 (0.07)
Employment status: NA	0.04 (0.09)
Children (yes)	0.07 (0.07)
Illness (yes)	-0.11 (0.04)**
Health assessment	0.08 (0.03)**
Wave: 2 (ref.: Wave1)	0.14 (0.04)***
Wave: 3	-0.01 (0.02)
Wave: 4	-0.13 (0.07)
Wave: 5	-0.15 (0.07)*
Wave: 6	-0.13 (0.08)
Wave: 7	-0.14 (0.08)
Wave: 8	-0.10 (0.08)
Wave: 9	-0.04 (0.08)
Wave: 10	-0.14 (0.08)
Wave: 11	-0.04 (0.08)
Wave: 12	-0.17 (0.08)*
Wave: 13	-0.06 (0.08)
West Germany (dummy)	-0.10 (0.08)
Religion: Muslim (ref.:Christian)	-0.16 (0.07)*
Religion: Jewish	-0.41 (0.08)***
Religion: None	0.07 (0.03)*
Religion: Other	0.01 (0.03)
Population density	-0.07 (0.03)*
Household income	-0.00 (0.03)
Unemployment rate	0.02 (0.02)
Share of pop over 75	-0.01 (0.02)
Share Catholic	0.01 (0.00)
Share female	0.00 (0.00)
AIC	10249.15
BIC	10549.05
Log Likelihood	-5076.57
Num. obs.	3820
Num. groups: kreis	382
Var: kreis (Intercept)	0.01

Var: Residual	0.78
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Note: Multilevel linear mixed-effects regression. Standard errors in parentheses.

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

Appendix Table S12 Effect of district level 7-day-incidence on religiosity among Catholics and Protestants

	<i>DV: Religiosity index</i>	
	Catholics	Protestants
7-day-incidence	-0.00 (0.00)	0.00 (0.00)
Age x 10	-0.00 (0.00)	-0.00* (0.00)
Age2	0.00 (0.00)	0.00** (0.00)
Male	0.01 (0.04)	-0.11* (0.05)
Education: Lower secondary (ref.: None)	0.11 (0.18)	-0.09 (0.22)
Education: Secondary	0.22 (0.18)	-0.00 (0.21)
Education: Abitur	0.27 (0.18)	0.03 (0.21)
Income (ref.: less than 750 Euro)		
750-1500 Euro	-0.12 (0.10)	-0.04 (0.11)
1500-2500 Euro	-0.13 (0.09)	-0.05 (0.11)
2500-4000 Euro	-0.18 (0.10)	-0.08 (0.11)
4000-6000 Euro	-0.16 (0.10)	-0.10 (0.12)
More than 6000 Euro	-0.03 (0.12)	0.01 (0.15)
Employment (ref.: Employed)		
Unemployed	0.09 (0.09)	0.02 (0.12)
Not in labor force	-0.11* (0.05)	-0.13* (0.06)
Children (yes)	0.06 (0.04)	0.12* (0.05)
Illnesses (yes)	0.08 (0.05)	0.18*** (0.05)
Health assessment	-0.00 (0.03)	-0.03 (0.04)
Waves (ref.: Wave 1)		
Wave 2	-0.16 (0.10)	-0.08 (0.13)
Wave 3	-0.21* (0.10)	-0.23 (0.12)
Wave 4	-0.18 (0.11)	-0.15 (0.12)
Wave 5	-0.12 (0.10)	-0.22 (0.13)
Wave 6	-0.16 (0.11)	-0.14 (0.12)
Wave 7	-0.09 (0.11)	-0.04 (0.13)
Wave 8	-0.29** (0.11)	-0.09 (0.13)
Wave 9	-0.06 (0.11)	-0.21 (0.13)
Wave 10	-0.16 (0.12)	-0.27* (0.13)
Wave 11	-0.09 (0.11)	-0.13 (0.13)
Wave 12	-0.14 (0.10)	-0.09 (0.13)
Wave 13	-0.13 (0.10)	-0.22 (0.11)
West Germany	-0.21 (0.14)	-0.47*** (0.12)
Population density	0.09* (0.04)	-0.00 (0.05)
Household income	-0.03 (0.04)	0.02 (0.04)
Unemployment rate	-0.08 (0.04)	-0.04 (0.05)
Share of pop over 75	-0.02 (0.04)	0.01 (0.04)
Share of Catholics	-0.03 (0.03)	0.06 (0.03)
Share female	-0.01 (0.02)	-0.02 (0.03)
Intercept	0.60 (0.32)	1.39*** (0.35)

	<i>DV: Religiosity index</i>	
	Catholics	Protestants
AIC	5227.86	3874.48
BIC	5445.06	4080.07
Log Likelihood	-2574.93	-1898.24
Num. obs.	1938	1439
Num. groups: Districts	349	326

Note: Multilevel linear mixed-effects regression. Standard errors in parentheses.

* p<0.05; ** p<0.01; *** p<0.001

Appendix Table S 13 Multilevel mixed-effects ordered logistic regression

	DV:					
	Prayer		Fatefulness		Importance	
7-day-incidence (district)	1.002	(0.003)	1.003	(0.004)	0.999	(0.004)
Worry about health (index)	1.099***	(0.030)	1.174***	(0.031)	1.188***	(0.034)
Tested positive: Self	4.457***	(1.115)	3.320***	(0.707)	3.177***	(0.770)
Tested positive: Family	2.150***	(0.408)	2.391***	(0.403)	1.740***	(0.290)
Tested positive: Friends	1.996***	(0.255)	1.501***	(0.186)	1.493***	(0.185)
Tested positive: Colleagues	1.211	(0.177)	1.491***	(0.212)	1.178	(0.165)
Tested positive: Neighbors	1.066	(0.112)	1.030	(0.124)	0.959	(0.108)
Worry about own job	1.652***	(0.124)	1.582***	(0.125)	1.486***	(0.110)
Worry about colleagues' job	0.873	(0.073)	1.009	(0.082)	0.964	(0.075)
Age x 10	0.997**	(0.001)	0.995***	(0.001)	0.996***	(0.001)
Age ²	1.000***	(0.000)	1.001***	(0.000)	1.000***	(0.000)
Male	0.836***	(0.048)	0.895**	(0.049)	0.968	(0.048)
Education: Lower (ref.: None)	1.337	(0.375)	1.447	(0.344)	1.181	(0.307)
Education: Secondary	1.662*	(0.459)	1.640**	(0.388)	1.413	(0.362)
Education: <i>Abitur</i>	1.943**	(0.538)	1.537*	(0.372)	1.546*	(0.398)
Income: 750-1500 (ref.: below 750 Euro)	0.869	(0.099)	0.862	(0.091)	0.922	(0.107)
Income: 1500-2500 Euro	0.875	(0.102)	0.804**	(0.087)	0.925	(0.101)
Income: 2500-4000 Euro	0.830	(0.095)	0.805*	(0.092)	0.900	(0.097)
Income: 4000-6000 Euro	0.833	(0.109)	0.728**	(0.095)	0.876	(0.115)
Income: +6000 Euro	1.056	(0.196)	0.981	(0.157)	1.062	(0.164)
Employment stat.: Unemployed (ref: Employed)	1.118	(0.144)	1.171	(0.146)	1.189	(0.146)
Employment stat.: N/A	0.860**	(0.061)	0.911	(0.060)	0.966	(0.063)
Children (Yes)	1.098	(0.069)	1.124*	(0.074)	1.245***	(0.077)
Previous illness (Yes)	1.163***	(0.066)	1.169**	(0.071)	1.030	(0.056)
Health assessment	0.981	(0.041)	1.001	(0.042)	0.995	(0.038)
Wave: 2 (ref. Wave: 1)	0.861	(0.121)	0.851	(0.129)	0.929	(0.142)
Wave: 3	1.109	(0.164)	0.958	(0.150)	1.064	(0.149)
Wave: 4	0.919	(0.123)	0.799	(0.109)	0.948	(0.122)
Wave: 5	0.809	(0.108)	0.796*	(0.106)	0.893	(0.112)
Wave: 6	1.008	(0.132)	0.848	(0.123)	1.046	(0.148)
Wave: 7	0.963	(0.148)	0.842	(0.129)	1.002	(0.134)
Wave: 8	0.914	(0.132)	0.737*	(0.123)	0.903	(0.130)
Wave: 9	0.853	(0.119)	0.818	(0.121)	1.040	(0.142)
Wave: 10	0.840	(0.127)	0.787	(0.125)	0.927	(0.135)
Wave: 11	1.081	(0.153)	0.978	(0.145)	1.053	(0.148)
Wave: 12	0.892	(0.134)	0.785	(0.115)	0.995	(0.143)
Wave: 13	0.957	(0.134)	0.945	(0.141)	0.989	(0.142)
West Germany (dummy)	0.917	(0.103)	0.849	(0.109)	0.683***	(0.078)
Religion: Muslim (ref.: Christian)	5.836***	(0.950)	8.226***	(1.254)	8.468***	(1.231)
Religion: Jewish	1.927**	(0.537)	2.263***	(0.519)	1.455	(0.378)
Religion: None	0.088***	(0.007)	0.121***	(0.009)	0.076***	(0.005)

Religion: Other	1.274	(0.330)	1.049	(0.230)	1.713**	(0.458)
Population density	1.129***	(0.050)	1.086	(0.059)	1.119*	(0.066)
Household income	1.013	(0.037)	1.010	(0.041)	1.018	(0.044)
Unemployment rate	0.875***	(0.040)	0.873***	(0.042)	0.904**	(0.043)
Share of pop over 75	1.057	(0.049)	1.032	(0.050)	1.006	(0.047)
Share of Catholics	1.078**	(0.036)	1.013	(0.034)	1.022	(0.035)
Share female	0.959	(0.028)	0.981	(0.030)	0.957	(0.027)
Intercept 1	0.595	(0.281)	0.291***	(0.114)	0.174***	(0.074)
Intercept 2	3.145**	(1.502)	1.134	(0.447)	0.932	(0.398)
Intercept 3	5.539***	(2.646)	5.025***	(1.988)	5.374***	(2.335)
Intercept 4	26.067***	(12.685)				
Observations	7,117		7,117		7,117	
Number of groups	399		399		399	
Log pseudo likelihood	-7027		-6664		-7056	
Probability > X2	0		0.791		3.588	

*Note: Multilevel mixed-effects ordered logistic regression. Odds ratios are reported. Robust standard errors in parentheses. * p<0.05; ** p<0.01; *** p<0.001*