

Supplementary Material

Table S1. Bivariate associations between ordinal and continuous variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1-Loneliness	X											
2- Adult co-residing children	-.15**	X										
3. Non-residing children meeting weekly	-.06	-.29**	X									
4. Low-satisfying child relationships ^a	.21**	-.15**	.04	X								
5. High-satisfying child relationships ^a	-.06	-.43**	.63**	.00	X							
6- Received emotional support from children	-.10*	-.05	.20**	-.03	.21**	X						
7. Filial expectations	.04	-.06	.07	-.03	.07 ⁺	.04	X					
8. Perceived health	-.26**	.12**	-.07 ⁺	-.14**	-.16**	.04	.04	X				
9. Income difficulties	.25**	.01	-.01	.15**	.02	-.11**	.06	-.29**	X			
10. Satisfaction with partner ^b	.01	-.02	-.02	.01	.05	-.04	.15**	-.01	-.04	X		

11. R. receiving emotional support	-.14**	-.03	.11**	.04	.09*	.27**	-.04	-.01	-.08 ⁺	-.07	X	
12. R. giving emotional support	-.23**	.00	.11**	-.04	.12**	.60**	-.03	-.13**	.19**	-.05	.64**	X
13. Age	.01	-.17**	.08*	.08*	.22**	-.01	-.04	-.21**	-.03	.04	-.03	-.03

⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$

^a Relationship satisfaction with non-residing children

^b Continuous with 0= not satisfied at all and 10= very satisfied.

Table S2. Differences in mean level of loneliness for dichotomous variables

Variable	Mean (se)	F
Men	1.81 (0.11)	1.79
Women	2.02 (0.12)	
Not having a partner	2.80 (0.19)	28.29*
Having a partner	1.72 (0.09)	
Having a disease and/or disability	2.42 (0.13)	30.29*
No disease or disability	1.55 (0.10)	
Being retired ^a	2.03 (0.14)	1.02
Not retired	1.86 (0.10)	
Being a homemaker ^b	1.52 (0.16)	6.89*
Not a homemaker	2.03 (0.09)	

* $p < 0.01$

^a Of the respondents who are retired, 70.7% are men

^b Of the respondents who are homemakers, 99.4% are women. The variable thus shows the difference in loneliness between women who are homemakers, and women who are not homemakers.

Table S3. Loneliness and migration-background characteristics

	1.	2.
1. Loneliness	X	
2. Age of migration to Germany	0.01	X
3. Years of residence in Germany	-0.01	-0.69*

* $p < 0.01$

Table S4. Gender differences in parent-child relationships

	Fathers	Mothers	
	Mean (se)	Mean (se)	F
Number of adult co-residing children	1.01 (0.07)	0.87 (0.07)	1.95
Number of non-residing children	1.60 (0.10)	1.84 (0.10)	2.77
Weekly contact with non-residing child(ren)	0.59 (0.06)	0.76 (0.07)	3.70*
Received emotional support from child(ren)	0.10 (0.03)	0.23 (0.04)	9.11**
Received emotional support from son(s)	0.05 (0.02)	0.10 (0.02)	1.88
Received emotional support from daughter(s)	0.05 (0.01)	0.15 (0.02)	13.65***
Low-satisfying relationships with child(ren)	0.22 (0.04)	0.16 (0.03)	1.44
Low-satisfying relationships with son(s)	0.13 (0.03)	0.10 (0.02)	1.19
Low-satisfying relationships with daughter(s)	0.09 (0.02)	0.07 (0.02)	0.68
High-satisfying relationships with child(ren)	1.34 (0.09)	1.66 (0.10)	5.59*
High-satisfying relationships with son(s)	0.72 (0.06)	0.97 (0.06)	8.87**
High-satisfying relationships with daughter(s)	0.62 (0.06)	0.69 (0.05)	0.78
Filial expectations	3.21 (0.06)	3.36 (0.06)	2.40

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table S5: Linear regression analysis for social and emotional loneliness

Variable	Social loneliness ^a	Emotional loneliness ^b
	B ^b (se)	B ^b (se)
Constant	2.05 (0.38)	0.98 (0.39)
Perceived health	-0.13 (0.06)*	-0.15 (0.06)*
Having a disease or illness (1=yes)	0.11 (0.12)	0.17 (0.11)
Income difficulties	0.07 (0.04)	0.10 (0.04)**
R. receiving emotional support besides children	-0.09 (0.11)	-0.07 (0.10)
R. given emotional support to others	-0.11 (0.08)	-0.08 (0.07)
Having a partner (1=yes)	0.36 (0.23)	0.07 (0.21)
High satisfaction with partner (1=yes)	-0.71 (0.22)**	-0.50 (0.20)*
Age ^c	0.00 (0.01)	0.00 (0.10)
Gender (1=women)	0.05 (0.13)	-0.04 (0.11)
Being retired (1=yes)	-0.17 (0.13)	-0.01 (0.12)
Being a homemaker (1=yes)	-0.39 (0.15)**	-0.03 (0.14)
H1. N. adult co-residing child(ren)	-0.11 (0.04)***	-0.08 (0.04)*
H1. N. weekly contact child(ren)	-0.10 (0.06)	0.06 (0.05)
H1. N. low satisfaction with child(ren) ^d	0.23 (0.08)**	0.16 (0.07)*
H1. N. high satisfaction with child(ren) ^d	-0.08 (0.04)*	-0.02 (0.04)
H1. N. child(ren) giving emotional support	0.02 (0.11)	-0.02 (0.10)
H2. Filial expectations	-0.08 (0.08)	0.10 (0.07)
H2a. Adult co-residing child x filial expectations ^e	0.01 (0.04)	-0.06 (0.04)
H2b. Perceived health x filial expectations ^e	0.21 (0.06)**	0.06 (0.06)
H2b. Disease x filial expectations ^e	0.15 (0.12)	0.06 (0.11)
H2c. Income difficulties x filial expectations ^e	0.01 (0.04)	-0.06 (0.04)
<i>R</i> ²	0.21	0.21
<i>R</i> ² adjusted	0.17	0.17

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^a Results of complete cases analysis with $n = 533$ for social loneliness and $n = 509$ for emotional loneliness

^b Unstandardized regression coefficients.

^c This variable is centered for a better interpretation of respondents who score 0 on age. Mean age= 58.74.

^d Satisfaction with non-residing children

^e Continuous variables were centered before making the interaction term to avoid multicollinearity. This means that the slope shows the effect of scoring above average on the variables. Mean values are: perceived health= 2.29, income difficulties= 2.94, filial expectations = 3.29.

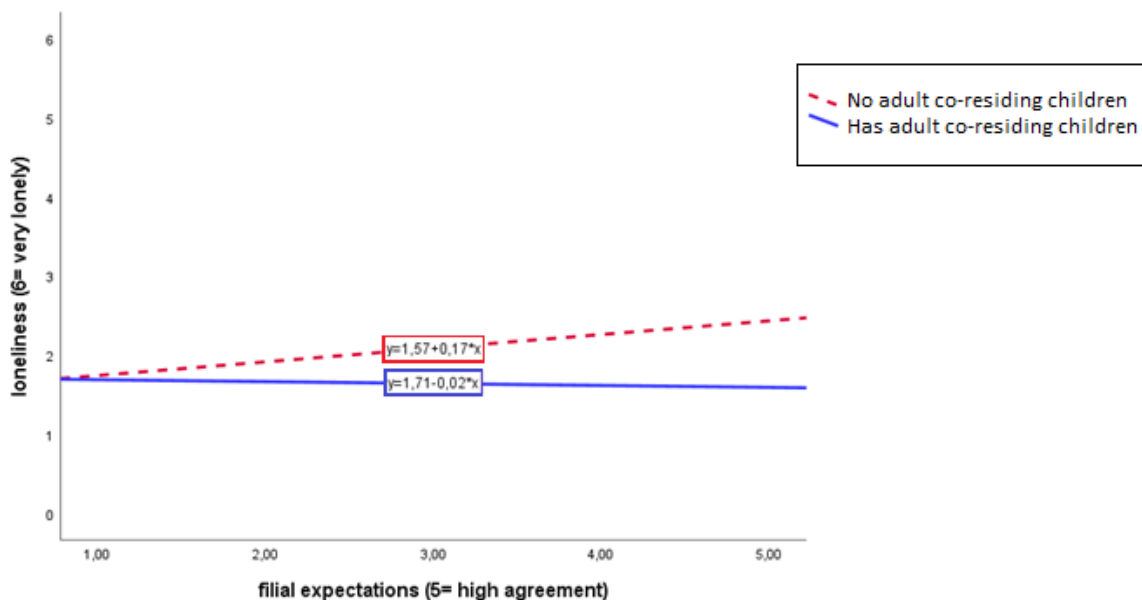


Figure S1: Interaction of observed values between loneliness and filial expectations for having adult co-residing children.

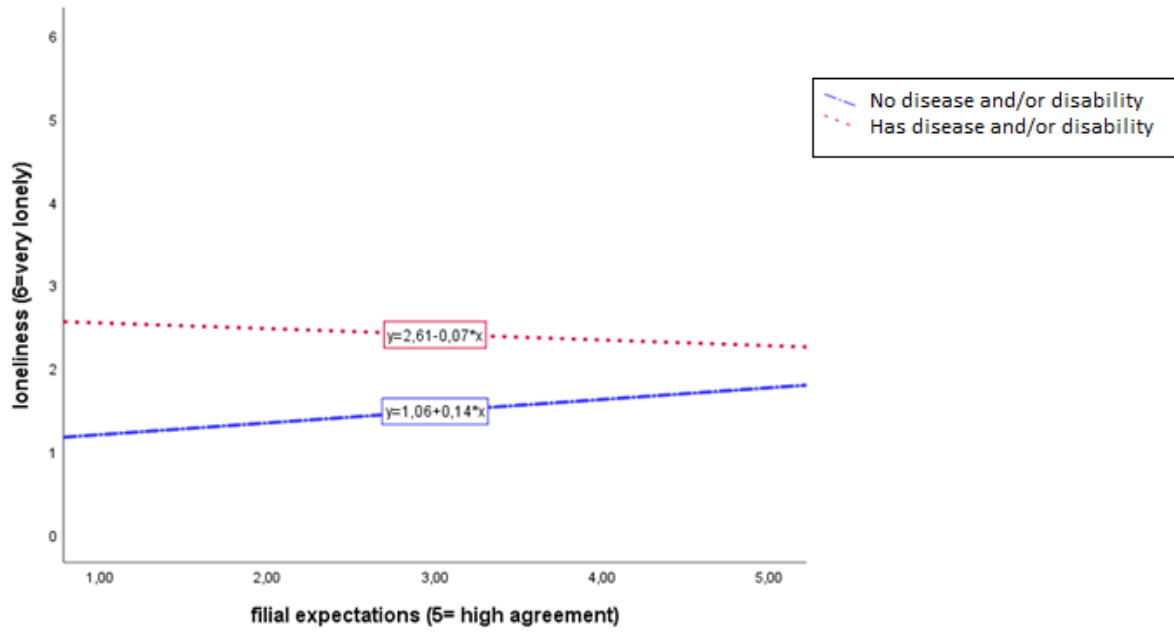


Figure S2: Interaction of observed values between loneliness and filial expectations for having a disease and/or disability.

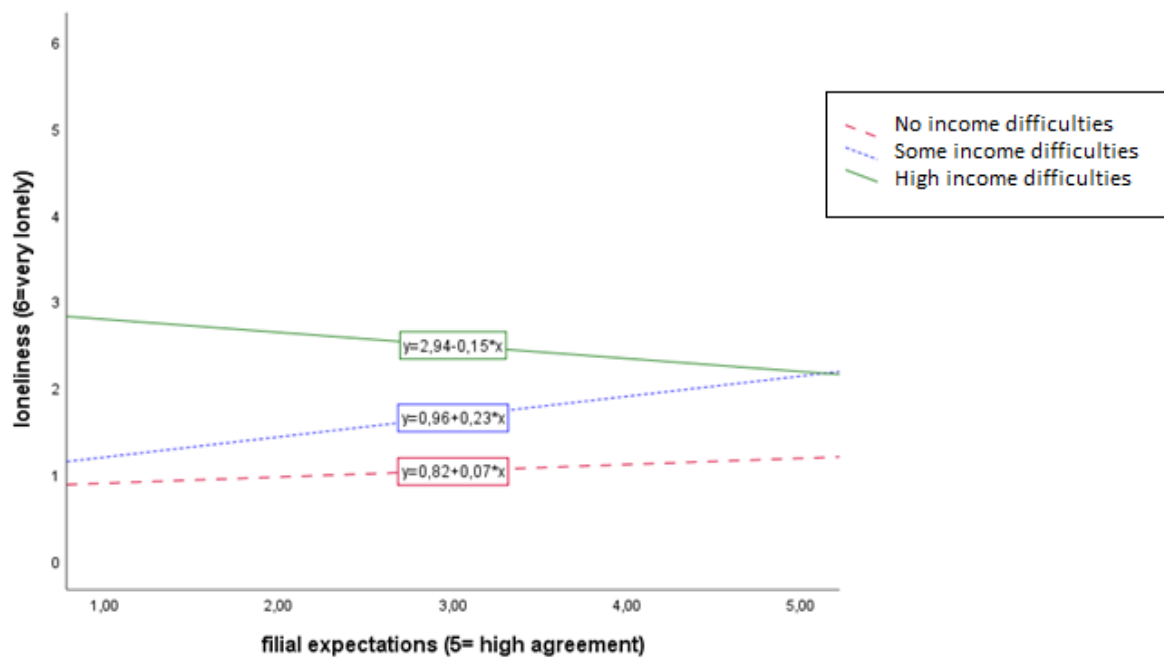


Figure S3: Interaction of observed values between loneliness and filial expectations for categories of having income difficulties.