Payoff of having children

Do elderly parents of more children live in a nursing home less often?

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Overview

Motivation

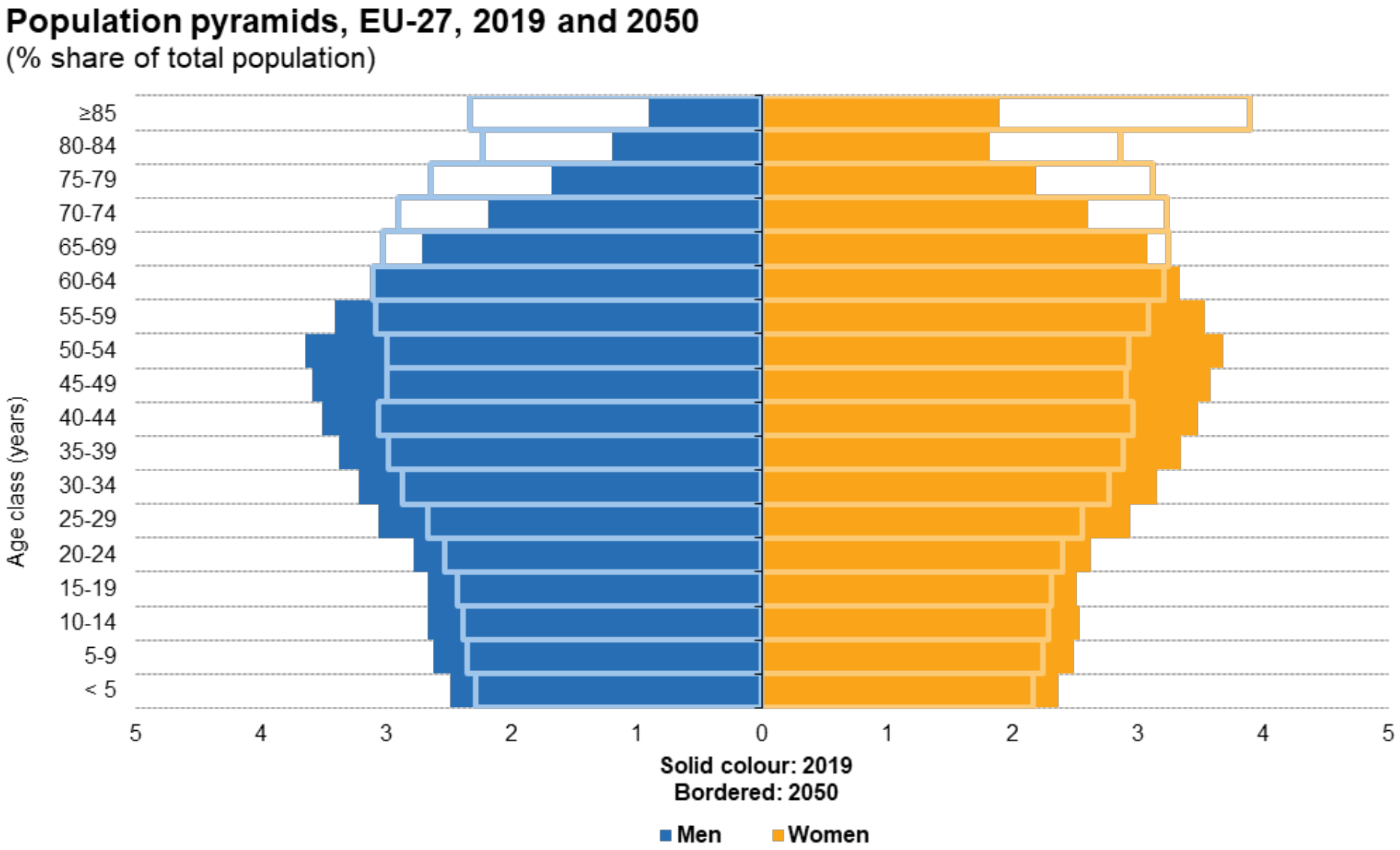

Figure: Population pyramid

Research Question

- population is getting grey [Eurostat, 2020]
- possible higher costs of providing adequate health and long-term care

Research Question

Do elderly parents of more children live in a nursing home less often?

- broadening existing research on this topic and also examining other factors which could possibly influence the probability of elderly being put in a nursing home

Hypothesis

Hypothesis

Having more children lowers the probability of living in a nursing home when old.

- one of the closest relationships and their naturally reversing roles as children are becoming adults and parents become fragile [Fingerman and Birditt, 2003]

Literature Review

- informal caregiving
  - relatively inexpensive and mainly provided by relatives [Matthews and Rosner, 1988]
  - spouse, children, siblings [Agree and Glaser, 2009]
- formal caregiving
  - institutionalisation - short term vs long term [Coughlin et al., 1990]
- natural caregivers, family diversity, cultural background, employment of children, health status of parents, residency

Data

- easySHARE dataset
- crossectional data
- wave 6, 2015
- 17 European of states
- 34 457 respondents
- 3 dependent variables

Data

Dependent variables

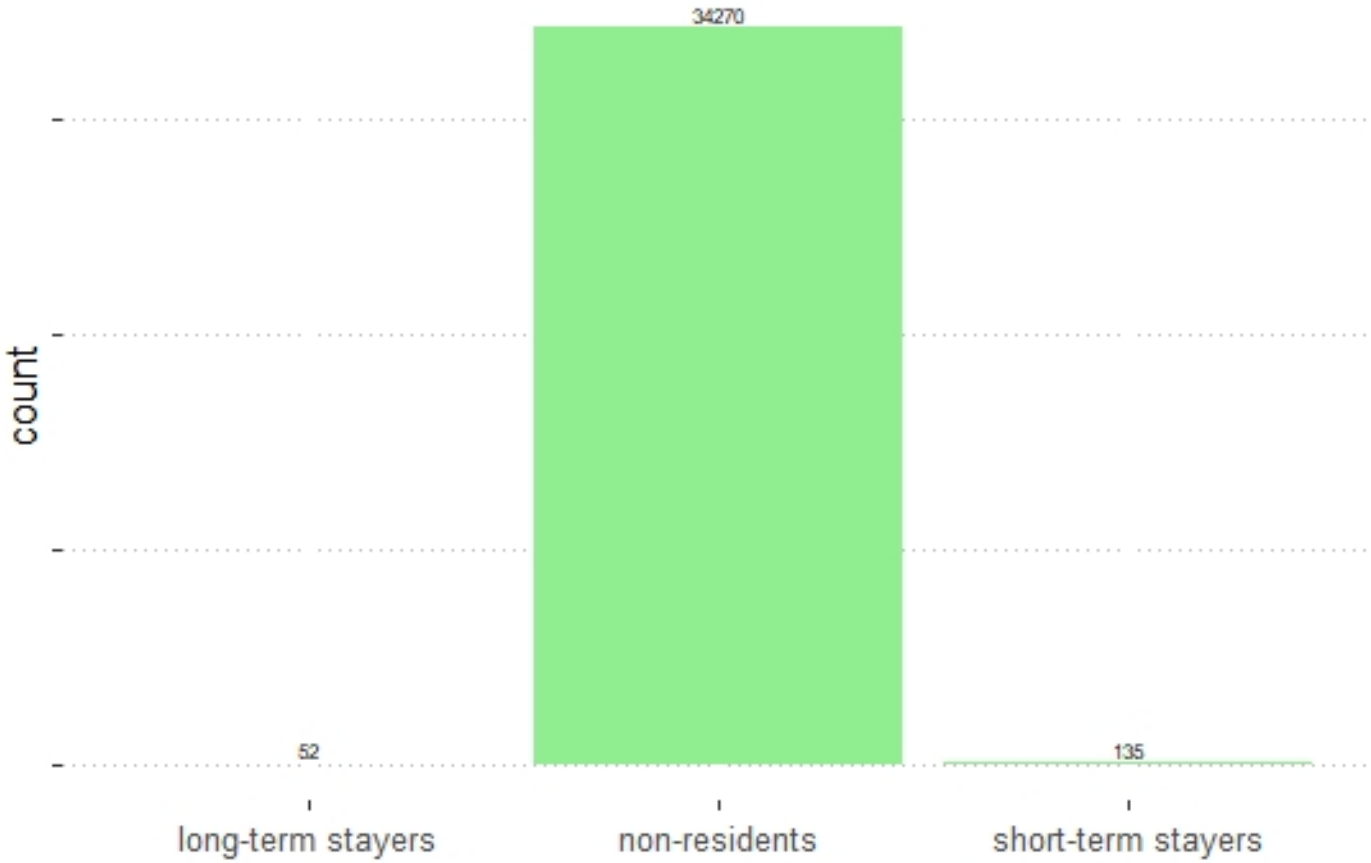

Figure: Distribution of residents and non-residents

Data

Children

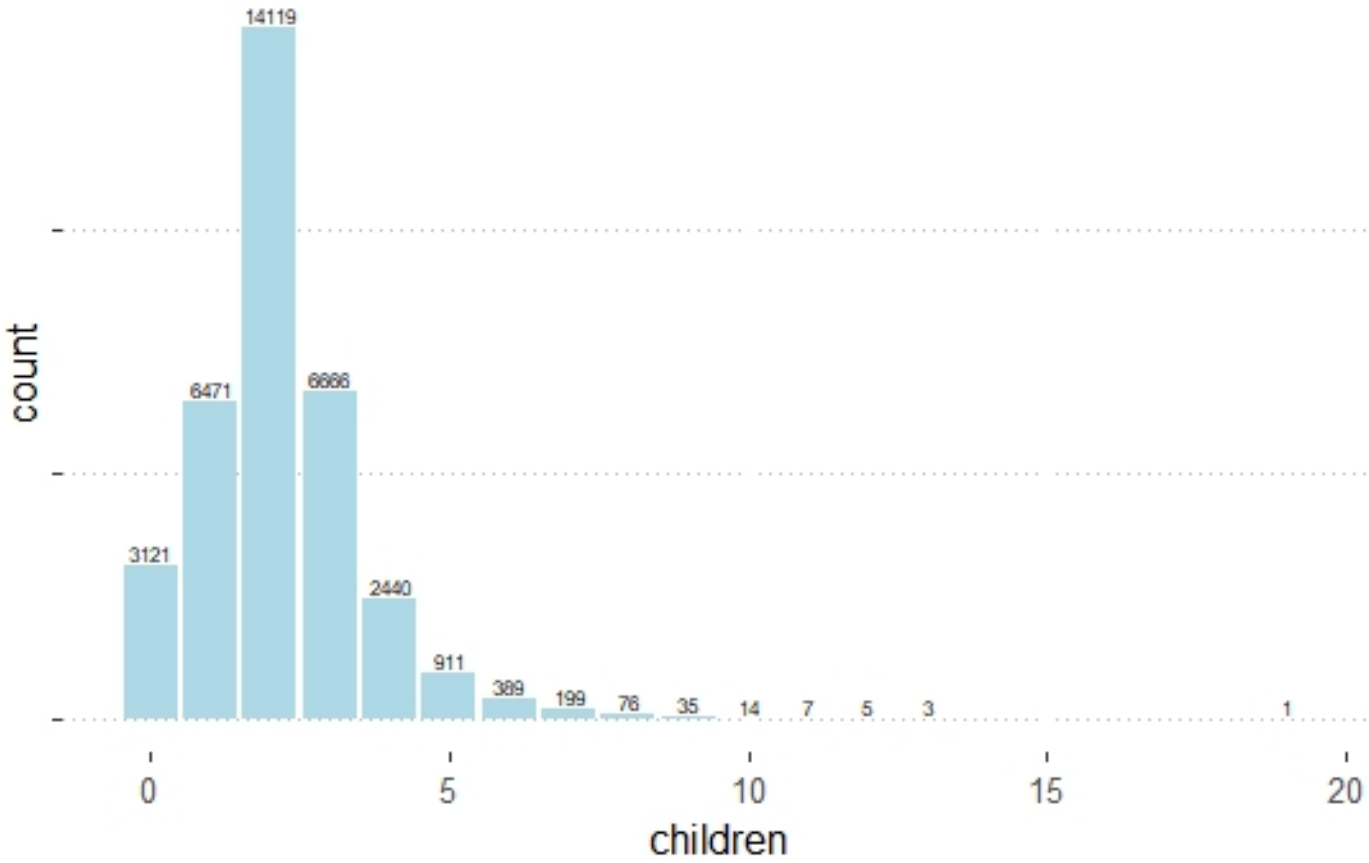

Figure: Distribution of number of children

Data

Other independent variables

- age
- gender
- marital status
- household size
- partner in a household
- geographical location
- residential proximity of children
- external help
- number of grandchildren
- self-perceived health
- physical disability
- hospital stays
- mental disability
- retired

Methodology

Variables

- Dependent variables - NH, NHLS, NHSS
- Independent variables - demographics, household composition, social network, health, job situation, functional and cognitive limitations

- logit models
- step-wise procedure
- average marginal effects
- predicted probabilities

Results

	Dependent variable:			
	NH		NHLS	NHSS
	(1)	(2)	(3)	(4)
Constant	−9.482*** (1.727)	−10.060*** (1.739)	−13.789*** (2.597)	−12.498*** (1.981)
age	0.081*** (0.016)	0.080*** (0.016)	0.093*** (0.026)	0.090*** (0.018)
female	0.315 (0.232)	0.347 (0.232)	0.092 (0.363)	0.338 (0.261)
children	−0.495*** (0.191)	−0.491** (0.191)	0.018 (0.143)	−0.429** (0.209)
nevermarried	−0.600 (1.058)	−0.587 (1.071)	-	-
hhsize	−1.064*** (0.346)	−1.051*** (0.346)	−1.339*** (0.360)	−0.727** (0.363)
physical_dis	0.047 (0.151)	0.043 (0.151)	0.836*** (0.098)	0.128 (0.178)
hosp_stays	1.088*** (0.208)	1.072*** (0.209)	−0.351 (0.385)	1.331*** (0.236)
health	0.234* (0.121)	0.229* (0.122)	0.120 (0.187)	0.367** (0.144)
retired	0.087 (0.348)	0.259 (0.340)	1.569 (1.038)	0.009 (0.373)
helpout_hh	0.288 (0.226)	0.319 (0.225)	−0.966*** (0.362)	0.601** (0.259)
child_km	−0.770*** (0.241)	−0.849*** (0.239)	−1.269*** (0.429)	−0.649** (0.262)
mental_dis	−0.659*** (0.130)	−0.646*** (0.130)	-	−0.483*** (0.163)
south	−0.806** (0.322)	-	−1.175** (0.554)	−0.534 (0.334)
central	-	0.565*** (0.216)	-	-
physical_dis:mental_dis	0.134*** (0.048)	0.138*** (0.048)	-	0.097* (0.055)
children:hhsize	0.337*** (0.097)	0.330*** (0.097)	-	0.311*** (0.100)
Observations	28,020	28,020	29,250	27,998
Count of dependent variable	102	102	41	80
McFadden R^2	0.2042	0.2042	0.2804	0.2139
Nagelkerke R^2	0.2081	0.2081	0.2825	0.2172
Log Likelihood	−536.856	−536.879	−223.322	−431.172
Note:				*p<0.1; **p<0.05; ***p<0.01

Results

Table: Predicted probabilities for children*hhsize for Model (1)

	hhsize			
children	1	2	3	4
0	0.002157	0.000745	0.000257	0.000089
1	0.001842	0.000892	0.000431	0.000209
2	0.001574	0.001067	0.000723	0.00049
3	0.001345	0.001277	0.001212	0.001151
4	0.001149	0.001527	0.002031	0.002699
5	0.000981	0.001827	0.0034	0.006318
6	0.000838	0.002186	0.005688	0.014717

Table: Predicted probabilities for children*hhsize for Model (4)

	hhsize			
children	1	2	3	4
0	0.001072	0.000518	0.000251	0.000121
1	0.000952	0.000628	0.000415	0.000274
2	0.000847	0.000762	0.000686	0.000617
3	0.000752	0.000924	0.001134	0.001393
4	0.000669	0.00112	0.001876	0.003139
5	0.000594	0.001358	0.0031	0.007059
6	0.000528	0.001646	0.005118	0.015798

Results

	Dependent variable:			
	NH		NHLS	NHSS
	(1)	(2)	(3)	(4)
Constant	−9.642*** (1.613)	−10.190*** (1.623)	−14.503*** (2.488)	−12.111*** (1.884)
age	0.074*** (0.016)	0.073*** (0.016)	0.085*** (0.026)	0.082*** (0.018)
female	0.200 (0.242)	0.234 (0.242)	−0.073 (0.373)	0.243 (0.274)
children	−0.173 (0.122)	−0.182 (0.122)	0.019 (0.144)	−0.184 (0.142)
nevermarried	−0.696 (1.054)	−0.687 (1.066)	-	-
partnerinh	−1.926*** (0.503)	−1.929*** (0.502)	−1.505*** (0.428)	−1.855*** (0.560)
physical_dis	0.059 (0.151)	0.053 (0.151)	0.800*** (0.098)	0.153 (0.180)
hosp_stays	1.076*** (0.209)	1.061*** (0.209)	−0.330 (0.385)	1.304*** (0.236)
health	0.228* (0.120)	0.223* (0.122)	0.100 (0.187)	0.365** (0.144)
retired	0.027 (0.348)	0.195 (0.339)	1.757* (1.043)	−0.061 (0.373)
helpout_hh	0.260 (0.223)	0.290 (0.222)	−0.796** (0.351)	0.548** (0.255)
child_km	−0.847*** (0.237)	−0.921*** (0.235)	−1.677*** (0.434)	−0.638** (0.256)
mental_dis	−0.659*** (0.131)	−0.646*** (0.131)	-	−0.477*** (0.165)
south	−0.779** (0.323)	-	−1.262** (0.556)	−0.499 (0.335)
central	-	0.561*** (0.216)	-	-
children:partnerinh	0.562*** (0.173)	0.564*** (0.173)	-	0.644*** (0.191)
physical_dis:mental_dis	0.131*** (0.048)	0.136*** (0.048)	-	0.094* (0.056)
Observations	28,020	28,020	29,250	27,998
Count of dependent variable	102	102	41	80
McFadden R^2	0.2076	0.2079	0.2751	0.2169
Nagelkerke R^2	0.2115	0.2119	0.2772	0.2202
Log Likelihood	−535.175	−534.376	−224.982	−430.964

Note: *p<0.1; **p<0.05; ***p<0.01

Results

Table: Predicted probabilities children*partnerinh for Model (1)

	partnerinh	
children	0	1
0	0.002608	0.000381
1	0.002195	0.000562
2	0.001848	0.00083
3	0.001556	0.001225
4	0.001309	0.001808
5	0.001102	0.002668
6	0.000928	0.003934

Table: Predicted probabilities children*partnerinh for Model (4)

	partnerinh	
children	0	1
0	0.001547	0.000242
1	0.001287	0.000384
2	0.001071	0.000608
3	0.000891	0.000963
4	0.000741	0.001524
5	0.000617	0.002412
6	0.000513	0.003817

Results

	Dependent variable:			
	NH		NHLS	NHSS
	(1)	(2)	(3)	(4)
Constant	−11.572*** (1.549)	−12.288*** (1.562)	−13.143*** (2.507)	−13.573*** (1.804)
age	0.081*** (0.017)	0.080*** (0.017)	0.071*** (0.027)	0.087*** (0.019)
female	0.204 (0.253)	0.238 (0.253)	−0.006 (0.396)	0.282 (0.289
nevermarried	−0.662 (1.059)	−0.644 (1.074)	-	-
grand_children	−0.099** (0.049)	−0.095* (0.049)	−0.056 (0.076)	−0.215*** (0.079)
partnerinh	−0.592** (0.254)	−0.587** (0.254)	−1.488*** (0.451)	−0.894* (0.459)
physical_dis	0.392*** (0.083)	0.396*** (0.084)	0.798*** (0.106)	0.402*** (0.091)
hosp_stays	1.171*** (0.217)	1.147*** (0.217)	−0.454 (0.422)	1.429*** (0.249)
health	0.297** (0.128)	0.308** (0.130)	0.131 (0.201)	0.448*** (0.155)
retired	0.058 (0.365)	0.196 (0.356)	1.528 (1.043)	0.009 (0.393)
helpout_hh	0.456** (0.232)	0.475** (0.232)	−0.606 (0.371)	0.762*** (0.269)
child_km	−0.766*** (0.244)	−0.831*** (0.242)	−1.508*** (0.442)	−0.535** (0.263)
mental_dis	−0.393*** (0.102)	−0.376*** (0.102)	-	−0.289** (0.118)
south	−0.696** (0.325)	-	−1.410** (0.627)	−0.397 (0.338
central	-	0.627*** (0.227)	-	-
grand_children:partnerinh	-	-	-	0.195* (0.114)
Observations	26,916	26,916	28,076	26,895
Count of dependent variable	94	94	36	73
McFadden R^2	0.2029	0.2051	0.2571	0.2252
Nagelkerke R^2	0.2066	0.2089	0.2589	0.2285
Log Likelihood	−498.700	−497.281	−204.832	−390.718
Note:				*p<0.1; **p<0.05; ***p<0.01

Predicted probabilities

Table: Predicted probabilities grand_children*partnerinh for Model (4)

	partnerinh	
grand_children	0	1
0	0.001731	0.000708
2	0.001128	0.000682
4	0.000734	0.000656
7	0.000386	0.000619
9	0.000251	0.000595

Conclusion

- having kids and their number per se is a decisive factor for short term stayers
- determining factor for long term stays is the physical proximity to children rather than their number
- importance of children as caregivers
- grandchildren can be beneficial addition to caregiving team

Thank you for your attention!

Descriptive Statistics

Statistic	Mean	St. Dev.	Min	Median	Max	NA's
NH	0.0054	0.0735	0	0	1	0
NHLS	0.0015	0.0389	0	0	1	135
NHSS	0.0039	0.0625	0	0	1	52
age	74.6324	6.8042	65	73.5	95	100
female	0.544	0.4981	0	1	1	0
hhsize	1.8574	0.6562	1	2	4	665
children	2.0915	1.2048	0	2	6	340
grand_children	3.2603	2.2755	0	3	9	4700
physical_dis	0.292	0.9096	0	0	5	0
health	3.3793	1.0295	1	3	5	0
mental_dis	3.796	0.5761	0	4	4	1696
partnerinh	0.6698	0.4703	0	1	1	0
helpout_hh	0.2609	0.4391	0	0	1	0
hosp_stays	0.314	0.415	0	0	1	0
child_km	0.4109	0.4920	0	0	1	4076
nevermarried	0.0411	0.1984	0	0	1	0
retired	0.8746	0.3312	0	1	1	0
south	0.2754	0.4467	0	0	1	0
north	0.2206	0.4146	0	0	1	0
central	0.504	0.5	0	1	1	0

	Dependent variable:			
	NH		NHLS	NHSS
	(1)	(2)	(3)	(4)
Constant	−9.482*** (1.727)	−10.060*** (1.739)	−13.789*** (2.597)	−12.498*** (1.981)
age	0.081*** (0.016)	0.080*** (0.016)	0.093*** (0.026)	0.090*** (0.018)
female	0.315 (0.232)	0.347 (0.232)	0.092 (0.363)	0.338 (0.261)
children	−0.495*** (0.191)	−0.491** (0.191)	0.018 (0.143)	−0.429** (0.209)
nevermarried	−0.600 (1.058)	−0.587 (1.071)	-	-
hhsize	−1.064*** (0.346)	−1.051*** (0.346)	−1.339*** (0.360)	−0.727** (0.363)
physical_dis	0.047 (0.151)	0.043 (0.151)	0.836*** (0.098)	0.128 (0.178)
hosp_stays	1.088*** (0.208)	1.072*** (0.209)	−0.351 (0.385)	1.331*** (0.236)
health	0.234* (0.121)	0.229* (0.122)	0.120 (0.187)	0.367** (0.144)
retired	0.087 (0.348)	0.259 (0.340)	1.569 (1.038)	0.009 (0.373)
helpout_hh	0.288 (0.226)	0.319 (0.225)	−0.966*** (0.362)	0.601** (0.259)
child_km	−0.770*** (0.241)	−0.849*** (0.239)	−1.269*** (0.429)	−0.649** (0.262)
mental_dis	−0.659*** (0.130)	−0.646*** (0.130)	-	−0.483*** (0.163)
south	−0.806** (0.322)	-	−1.175** (0.554)	−0.534 (0.334)
central	-	0.565*** (0.216)	-	-
physical_dis:mental_dis	0.134*** (0.048)	0.138*** (0.048)	-	0.097* (0.055)
children:hhsize	0.337*** (0.097)	0.330*** (0.097)	-	0.311*** (0.100)
Observations	28,020	28,020	29,250	27,998
Count of dependent variable	102	102	41	80
McFadden R^2	0.2042	0.2042	0.2804	0.2139
Nagelkerke R^2	0.2081	0.2081	0.2825	0.2172
Log Likelihood	−536.856	−536.879	−223.322	−431.172

Note: *p<0.1; **p<0.05; ***p<0.01

Table: Predicted probabilities for physical_dis*mental_dis for Model (1)

	mental_dis				
physical_dis	0	1	2	3	4
0	0.012733	0.006631	0.003443	0.001785	0.000925
1	0.013338	0.00794	0.004716	0.002797	0.001658
2	0.01397	0.009504	0.006456	0.004381	0.002971
3	0.014632	0.011373	0.008833	0.006856	0.005319
4	0.015326	0.013604	0.012074	0.010713	0.009505
5	0.016051	0.016266	0.016484	0.016704	0.016928

Table: Predicted probabilities for physical_dis*mental_dis for Model (4)

	mental_dis				
physical_dis	0	1	2	3	4
0	0.004626	0.002858	0.001764	0.001088	0.000671
1	0.005254	0.003575	0.002431	0.001652	0.001123
2	0.005968	0.004471	0.003348	0.002506	0.001876
3	0.006778	0.005591	0.004611	0.003802	0.003134
4	0.007696	0.006989	0.006346	0.005762	0.005231
5	0.008739	0.008734	0.008729	0.008724	0.008719

Logistic regression without mental_dis*physical_dis

	Dependent variable:			
	NH		NHLS	NHSS
	(1)	(2)	(3)	(4)
Constant	−11.126*** (1.645)	−11.753*** (1.661)	−13.789*** (2.597)	−13.746*** (1.867)
age	0.087*** (0.016)	0.087*** (0.016)	0.093*** (0.026)	0.094*** (0.018)
female	0.317 (0.233)	0.347 (0.233)	0.092 (0.363)	0.338 (0.261)
children	−0.492** (0.192)	−0.491** (0.191)	0.018 (0.143)	−0.426** (0.209)
nevermarried	−0.628 (1.068)	−0.613 (1.082)	-	-
hhsize	−1.051*** (0.348)	−1.044*** (0.348)	−1.339*** (0.360)	−0.719** (0.365)
physical_dis	0.407*** (0.081)	0.411*** (0.082)	0.836*** (0.098)	0.402*** (0.089)
hosp_stays	1.099*** (0.208)	1.083*** (0.209)	−0.351 (0.385)	1.336*** (0.236)
health	0.262** (0.121)	0.259** (0.122)	0.120 (0.187)	0.389*** (0.144)
retired	0.118 (0.352)	0.292 (0.344)	1.569 (1.038)	0.035 (0.376)
helpout_hh	0.336 (0.225)	0.368 (0.224)	−0.966*** (0.362)	0.630** (0.258)
child_km	−0.766*** (0.242)	−0.846*** (0.240)	−1.269*** (0.429)	−0.645** (0.263)
mental_dis	−0.368*** (0.099)	−0.346*** (0.099)	-	−0.250** (0.114)
south	−0.819** (0.324)	-	−1.175** (0.554)	−0.541 (0.335)
central	-	0.559*** (0.216)	-	-
children:hhsize	0.332*** (0.097)	0.326*** (0.097)	-	0.307*** (0.101)
Observations	28,020	28,020	29,250	27,998
Count of dependent variable	102	102	41	80
McFadden R^2	0.1984	0.1981	0.2804	0.2112
Nagelkerke R^2	0.2023	0.202	0.2825	0.2144
Log Likelihood	−540.767	−540.970	−223.322	−432.688

Note: *p<0.1; **p<0.05; ***p<0.01

Logistic regression children dummy I

	Dependent variable:			
	NH		NHLS	NHSS
	(1)	(2)	(3)	(4)
Constant	−7.972*** (1.822)	−8.433*** (1.833)	−14.051*** (2.365)	−9.665*** (1.984)
age	0.074*** (0.014)	0.073*** (0.014)	0.096*** (0.023)	0.076*** (0.016)
female	0.212 (0.204)	0.226 (0.205)	−0.144 (0.317)	0.245 (0.233)
children_d	−2.205* (1.162)	−2.202* (1.163)	0.045 (0.422)	−2.874** (1.154)
hhsize	−2.167** (1.024)	−2.183** (1.023)	−1.509*** (0.321)	−2.075** (1.025)
nevermarried	0.745** (0.375)	0.732* (0.380)	-	-
physical_dis	0.047 (0.139)	0.039 (0.140)	0.819*** (0.089)	0.143 (0.171)
hosp_stays	1.005*** (0.189)	0.995*** (0.189)	−0.417 (0.350)	1.259*** (0.214)
health	0.194* (0.108)	0.197* (0.109)	0.084 (0.171)	0.325** (0.129)
retired	0.128 (0.318)	0.249 (0.311)	1.869* (1.029)	0.051(0.339)
helpout_hh	0.228 (0.201)	0.246 (0.201)	−0.997*** (0.325)	0.577** (0.231)
mental_dis	−0.600*** (0.117)	−0.592*** (0.118)	-	−0.381** (0.153)
south	−0.576** (0.262)	-	−1.113** (0.454)	−0.272 (0.277)
central	-	0.459** (0.192)	-	-
children_d:hhsize	1.873* (1.032)	1.874* (1.031)	-	2.036** (1.035)
physical_dis:mental_dis	0.123*** (0.045)	0.127*** (0.045)	-	0.076 (0.053)
Observations	31,829	31,829	33,259	31,801
Count of dependent variable	125	125	50	97
McFadden R^2	0.1781	0.1784	0.2715	0.178
Nagelkerke R^2	0.1819	0.1822	0.2737	0.183
Log Likelihood	−671.672	−671.404	−273.173	−540.172

Note: *p<0.1; **p<0.05; ***p<0.01

Predicted probabilities

Table: Predicted probabilities for children_d*hhsize for Model (1)

	hhsize			
children	1	2	3	4
0	0.002923	0.000336	0.000038	0.000004
1	0.002099	0.001566	0.001168	0.000872

Table: Predicted probabilities for children_d*hhsize for Model (4)

	hhsize			
children	1	2	3	4
0	0.002713	0.000342	0.000043	0.000005
1	0.001176	0.001132	0.00109	0.00105

Logistic regression children dummy II

	Dependent variable:			
	NH		NHLS	NHSS
	(1)	(2)	(3)	(4)
Constant	−9.962*** (1.419)	−10.501*** (1.427)	−15.405*** (2.271)	−11.380*** (1.629)
age	0.070*** (0.014)	0.070*** (0.014)	0.093*** (0.023)	0.070*** (0.016)
female	0.097 (0.212)	0.115 (0.212)	−0.222 (0.326)	0.108 (0.242)
children_d	0.008 (0.302)	0.011 (0.306)	−0.111 (0.420)	−0.390 (0.278)
nevermarried	0.795** (0.367)	0.784** (0.372)	-	-
partnerinh	−0.655*** (0.224)	−0.659*** (0.224)	−1.331*** (0.383)	−0.538** (0.246)
physical_dis	0.029 (0.138)	0.021 (0.138)	0.741*** (0.087)	0.125 (0.171)
hosp_stays	1.010*** (0.189)	0.997*** (0.189)	−0.378 (0.349)	1.255*** (0.214)
health	0.191* (0.107)	0.193* (0.108)	0.049 (0.171)	0.330** (0.129)
retired	0.103 (0.318)	0.239 (0.310)	2.029** (1.030)	0.015 (0.339)
helpout_hh	0.249 (0.198)	0.277 (0.197)	−0.701** (0.312)	0.558** (0.228)
mental_dis	−0.599*** (0.117)	−0.589*** (0.117)	-	−0.380** (0.153)
south	−0.630** (0.262)	-	−1.228*** (0.453)	−0.296 (0.277)
central	-	0.481** (0.192)	-	-
physical_dis:mental_dis	0.121*** (0.044)	0.124*** (0.044)	-	0.078 (0.053)
Observations	31,829	31,829	33,259	31,801
Count of dependent variable	125	125	50	97
McFadden R^2	0.1763	0.1763	0.2507	0.1776
Nagelkerke R^2	0.18	0.18	0.2528	0.1806
Log Likelihood	−673.190	−673.174	−280.970	−541.768

Note: *p<0.1; **p<0.05; ***p<0.01

Logistic regression grandchildren dummy

	Dependent variable:			
	NH		NHLS	NHSS
	(1)	(2)	(3)	(4)
Constant	−11.523*** (1.566)	−12.231*** (1.577)	−13.086*** (2.530)	−13.506*** (1.836)
age	0.079*** (0.017)	0.078*** (0.017)	0.070*** (0.027)	0.085*** (0.019)
female	0.197 (0.253)	0.229 (0.253)	−0.012 (0.396)	0.275 (0.289)
nevermarried	−0.604 (1.056)	−0.585 (1.071)	-	-
grandchildren_d	−0.262 (0.361)	−0.237 (0.361)	−0.241 (0.550)	−0.597 (0.491)
partnerinh	−0.609** (0.254)	−0.603** (0.254)	−1.493*** (0.451)	−0.978 (0.859)
physical_dis	0.386*** (0.083)	0.389*** (0.084)	0.798*** (0.106)	0.394*** (0.091)
hosp_stays	1.161*** (0.216)	1.137*** (0.217)	−0.463 (0.422)	1.421*** (0.249)
health	0.307** (0.128)	0.316** (0.130)	0.134 (0.201)	0.458*** (0.155)
retired	0.037 (0.365)	0.175 (0.355)	1.550 (1.043)	−0.014 (0.392)
helpout_hh	0.441* (0.233)	0.459** (0.232)	−0.614* (0.371)	0.737** (0.27)
child_km	−0.769*** (0.244)	−0.835*** (0.242)	−1.503*** (0.442)	−0.544** (0.263)
mental_dis	−0.389*** (0.102)	−0.374*** (0.103)	-	−0.285** (0.118)
south	−0.686** (0.325)	-	−1.407** (0.627)	−0.369 (0.338)
central	-	0.630*** (0.227)	-	-
grandchildren_d:partnerinh				0.737 (0.883)
Observations	26,916	26,916	28,076	26,895
Count of dependent variable	94	94	36	73
McFadden R^2	0.1999	0.2024	0.2564	0.2183
Nagelkerke R^2	0.2036	0.2061	0.2583	0.2215
Log Likelihood	−500.554	−499.009	−205.022	−394.176

Note: *p<0.1; **p<0.05; ***p<0.01

Additional variables

- financial situation
  - people with higher income are more probable to be placed in nursing home permanently [Palmore, 1976]
  - individuals with lower incomes were more likely to use nursing homes than those with higher income [Coughlin et al., 1990]
- race
  - Blacks have a much lower rate of institutionalisation than Whites [Coughlin et al., 1990, Freedman et al., 1994]
- religion
  - religion may provide hope and motivate patients to do more things for themselves, delaying the need for nursing home placement [Koenig et al., 2004]

- more specific health condition
  - cancer, respiratory problems, nerve or muscle problems, heart trouble
- more information about caregiver
  - daughters are much more devoted caregivers than sons [Brody, 1985]
  - employment
- residency
  - predictors of institutionalisation vary for rural, small city, and urban elders [Dwyer et al., 1994]
  - people in rural areas depend more on family and less on formal home care services than people in urban areas [Freedman, 1996]

Empirical evidence

- long term care is time consuming [Polivka, 2005]
- if parents require special attention or taking care of them is challenging daughters rather stay in the job and support their parents financially as they can get more professional care [Doty et al., 1998]
- importance of the quality/type of relationship between parents and children and how children perceive filial responsibility when long term care is considered [Bromley and Blieszner, 1997]

Table: AME for Table the first set of models

	AME NH		AME NHLS	AME NHSS
	(1)	(2)	(3)	(4)
age	0.0003	0.0003	0.0001	0.0002
children	-0.002	-0.002	-	-0.001
hhsize	-0.004	-0.004	-0.002	-0.002
physical_dis	-	-	0.001	-
hosp_stays	0.004	0.004	-	0.004
health	0.001	0.0008	-	0.001
helpout_hh	-	-	-0.001	0.002
child_km	-0.003	-0.003	-0.002	-0.002
mental_dis	-0.002	-0.002	-	-0.001
south	-0.003	-	-0.002	-
central	-	0.002	-	-
children*hhsize	0.001	0.001	-	0.001
physical_dis*mental_dis	0.0005	0.0005	-	0.0003
Observations	28,020	28,020	29,250	27,998

Table: AME for Table the second set of models

	AME NH		AME NHLS	AME NHSS
	(1)	(2)	(3)	(4)
age	0.0003	0.0003	0.0001	0.0002
partnerinh	-0.007	-0.007	-0.002	-0.005
physical_dis	-	-	0.001	-
retired	-	-	0.002	-
hosp_stays	0.004	0.004	-	0.004
health	0.001	0.001	-	0.001
helpout_hh	-	-	-0.001	0.002
child_km	-0.003	-0.003	-0.002	-0.002
mental_dis	-0.002	-0.002	-	-0.001
south	-0.003	-	-0.002	-
central	-	0.002	-	-
physical_dis*mental_dis	0.0005	0.0005	-	0.0003
children*partnerinh	0.002	0.002	-	0.002
Observations	28,020	28,020	29,250	27,998

Table: AME for Table the third set of models

	AME NH		AME NHLS	AME NHSS
	(1)	(2)	(3)	(4)
age	0.0003	0.0003	0.0001	0.0002
grand_children	-0.0003	-0.0003	-	-0.0006
partnerinh	-0.002	-0.002	-0.002	-0.002
physical_dis	0.001	0.001	0.001	0.001
hosp_stays	0.004	0.004	-	0.004
health	0.001	0.001	-	0.001
helpout_hh	0.002	0.002	-	0.002
child_km	-0.003	-0.003	-0.002	-0.001
mental_dis	-0.001	-0.001	-	-0.001
south	-0.002	-	-0.002	-
central	-	0.002	-	-
grand_children*partnerinh	-	-	-	0.005
Observations	26,916	26,916	28,076	26,896

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