ONLINE SUPPLEMENTARY MATERIALS

Title: The Education of Multiple Family Members and the Life Course Pathways to Cognitive Impairment

Journal: Journal of Gerontology – Series B, Social Sciences

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Supplementary Table S1. Results from Logistic Regression Models Predicting Onset of Cognitive Impairment, Adults aged 65+, across different methods of handling missing data

	Multiple Imputation then deletion	Listwise deletion	Multiple Imputation
Respondent characteristics			
Respondent's education (<High school)			
High school	-0.584***	-0.585***	-0.544***
	[0.061]	[0.061]	[0.084]
Some college	-0.826***	-0.821***	-0.589***
	[0.083]	[0.0831]	[0.122]
College +	-0.796***	-0.801***	-0.696***
	[0.090]	[0.090]	[0.115]
Age	0.126***	0.126***	0.119***
	[0.006]	[0.006]	[0.008]
Female	0.057	0.059	0.12
	[0.056]	[0.056]	[0.074]
Race (/NH White)			
Black	0.476***	0.476***	0.481***
	[0.076]	[0.076]	[0.104]
Other	0.194	0.193	0.261
	[0.202]	[0.202]	[0.262]
Hispanic	0.454***	0.456***	0.275*
	[0.085]	[0.085]	[0.119]
Marital Status (/Married)			
Separated/Divorced	0.272**	0.273**	0.339**
	[0.097]	[0.097]	[0.117]
Widowed	0.118	0.124*	0.13
	[0.061]	[0.061]	[0.081]
Never married	0.094	0.096	0.221
	[0.310]	[0.310]	[0.385]
Number of Kids	-0.005	-0.002	-0.011
	[0.012]	[0.012]	[0.017]
Proxy	1.413***	1.4180***	1.510***
	[0.075]	[0.075]	[0.096]
Birth cohort (/AHEAD (<1924)			
CODA (1924-1930)	0.085	0.088	0.200*
	[0.077]	[0.076]	[0.097]
HRS (1931-1941)	0.267**	0.272**	0.318*
	[0.102]	[0.102]	[0.137]

(cont.) Supplementary Table S1. Results from Logistic Regression Models Predicting Onset of Cognitive Impairment, Adults aged 65+, across different methods of handling missing data

	Multiple Imputation then deletion	Listwise deletion	Multiple Imputation
WB (1942-1947)	0.325	0.331	0.031
	[0.264]	[0.264]	[0.291]
Early life conditions			
Parent's education (<High school)			
High school	-0.134	-0.135	-0.299**
	[0.090]	[0.090]	[0.114]
Some college	-0.289	-0.290	-0.610***
	[0.166]	[0.166]	[0.184]
College +	0.017	0.016	-0.038
	[0.145]	[0.145]	[0.193]
Poor childhood health (/good)	0.292**	0.293**	0.336**
	[0.094]	[0.094]	[0.104]
Southern birth (/non-Southern)	0.277***	0.279***	0.190*
	[0.056]	[0.056]	[0.076]
Offspring education (/No children w/college)			
Some offspring w/college	-0.201**	-0.203**	-0.197*
	[0.074]	[0.074]	[0.100]
All offspring w/college	-0.307***	-0.314***	-0.379***
	[0.079]	[0.078]	[0.101]
Constant	-12.583***	-12.558***	-12.020***
	[0.494]	[0.4931]	[0.671]
Sample size (person-years)	60,120	52,794	57,650

Source: *HRS, 2000-12*

Note: All models account for clustering at household level.

*** $p<.001$; ** $p<.01$; * $p<.05$

Supplementary Table S2: Descriptive Statistics at for all Person-Waves, Adults age 65+ (N=52,794)

Respondent's characteristics	Percent/ Mean	SE	Respondent early life conditions	Percent/Mean	SE
Cognitive health			Parental Education		
Not impaired	97.9		< High school	67.0	
Impaired	2.1		High school	20.1	
Age	75.5	0.03	Some college	6.3	
Birth cohort			College+	6.5	
AHEAD (<1924)	20.7		Poor childhood health	6.0	
CODA (1924-1930)	25.6		Southern birth	32.8	
HRS (1931-1941)	48.9				
WB (1942-1947)	4.8				
Gender			**Offspring characteristics**		
Men	42.3		Offspring education		
Women	57.7		No offspring w/college	11.5	
Race			Some offspring w/college	45.1	
NH White	80.0		All offspring w/college	43.4	
Black	11.3		Received transfers from 1+ child	2.6	
Other	1.5		Proximity to offspring	0.7	
Hispanic	7.2		No child cores/lives w/in 10miles	35.1	
Marital status			1+ child cores/lives w/in 10miles	64.9	
Married/Partnered	61.1				
Separated/Divorced	8.2				
Widowed	30.0		**Respondent's health behaviors/conditions**		
Never married	0.7		Ever smoked	8.6	
Respondent education			Exercise at baseline	31.3	
< High school	26.8		Ever diagnosed - diabetes	22.8	
High school	35.3		Ever diagnosed - heart disease	33.3	
Some college	19.1		Ever had stroke	9.4	
College+	18.8		CES-D	1.4	0.01
Number of kids	3.5	0.01			
Proxy status	5.5				

Source: *HRS, 2000-12*

Supplementary Table S3. Results from Logistic Regression Models Predicting Onset of Cognitive Impairment, Adults aged 65+, by Different Measures of Offspring Education

	Share of college completion	Share of high school completion	Most educated child	Mean education	Education of eldest child
Offspring Education					
Offspring college completion/(no children w/college)					
Some offspring w/college	-0.201**				
	[0.074]				
All offspring w/college	-0.307***				
	[0.079]				
Offspring high school completion/(no offspring w/HS)					
Some offspring w/HS		-0.174			
		[0.233]			
All offspring w/HS		-0.441			
		[0.228]			
Most educated child (years schooling)			-0.050***		
			[0.013]		
Mean education of offspring (years schooling)				-0.051***	
				[0.014]	
Education of eldest child (years schooling)					-0.046***
					[0.012]
Other offspring characteristics					
Received transfers from offspring (/None)	0.035	0.043	0.020	0.026	0.013
	[0.126]	[0.125]	[0.128]	[0.127]	[0.134]
1+ child cores/lives w/in 10miles (/None)	0.066	0.08	0.062	0.071	0.05
	[0.054]	[0.054]	[0.055]	[0.055]	[0.059]

(cont.) Supplementary Table S3. Results from Logistic Regression Models Predicting Onset of Cognitive Impairment, Adults aged 65+, by Different Measures of Offspring Education

	Share of college completion	Share of high school completion	Most educated child	Mean education	Education of eldest child
Respondent characteristics					
Education (<High school)					
High school	-0.595***	-0.571***	-0.580***	-0.571***	-0.595***
	[0.061]	[0.061]	[0.062]	[0.062]	[0.064]
Some college	-0.827***	-0.841***	-0.805***	-0.791***	-0.797***
	[0.083]	[0.082]	[0.084]	[0.084]	[0.086]
College +	-0.797***	-0.826***	-0.769***	-0.760***	-0.759***
	[0.090]	[0.088]	[0.091]	[0.092]	[0.093]
Age	0.126***	0.124***	0.128***	0.126***	0.128***
	[0.006]	[0.006]	[0.006]	[0.006]	[0.006]
Female	0.057	0.052	0.064	0.063	0.065
	[0.056]	[0.056]	[0.057]	[0.057]	[0.059]
Race (/NH White)					
Black	0.476***	0.464***	0.456***	0.467***	0.492***
	[0.076]	[0.076]	[0.079]	[0.078]	[0.081]
Other	0.194	0.159	0.217	0.208	0.214
	[0.202]	[0.203]	[0.210]	[0.208]	[0.217]
Hispanic	0.454***	0.409***	0.455***	0.444***	0.475***
	[0.085]	[0.087]	[0.087]	[0.087]	[0.089]
Marital Status (/Married)					
Separated/Divorced	0.272*	0.265**	0.272*	0.275*	0.267*
	[0.097]	[0.097]	[0.099]	[0.099]	[0.103]
Widowed	0.118	0.120*	0.116	0.115	0.105
	[0.061]	[0.061]	[0.062]	[0.062]	[0.064]

(cont.) Supplementary Table S3. Results from Logistic Regression Models Predicting Onset of Cognitive Impairment, Adults aged 65+, by Different Measures of Offspring Education

	Share of college completion	Share of high school completion	Most educated child	Mean education	Education of eldest child
Never married	-0.094	0.098	-0.116	-0.010	-0.124
	[0.310]	[0.308]	[0.353]	[0.347]	[0.370]
Number of Kids	-0.005	-0.014	0.001	-0.009	-0.012
	[0.012]	[0.012]	[0.011]	[0.012]	[0.012]
Birth cohort (/AHEAD (<1924)					
CODA (1924-1930)	0.086	0.080	0.095	0.075	0.088
	[0.076]	[0.076]	[0.082]	[0.077]	[0.079]
HRS (1931-1941)	0.268**	0.245*	0.271**	0.243**	0.271**
	[0.102]	[0.102]	[0.104]	[0.104]	[0.107]
WB (1942-1947)	0.326	0.286	0.332	0.288	0.266
	[0.264]	[0.264]	[0.271]	[0.271]	[0.295]
Proxy status	1.413***	1.408***	1.424***	1.433***	1.484***
	[0.075]	[0.075]	[0.076]	[0.076]	[0.078]
Early life conditions					
Poor childhood health (/good)	0.292**	-0.125	0.314**	0.295**	0.281**
	[0.094]	[0.090]	[0.100]	[0.096]	[0.099]
Southern birth (/non-Southern)	0.277***	-0.3	0.283***	0.281***	0.267***
	[0.056]	[0.165]	[0.057]	[0.056]	[0.058]
Parent's education (<High school)					
High school	-0.135	0.019	-0.119	-0.121	-0.120
	[0.090]	[0.145]	[0.091]	[0.091]	[0.094]
Some college	-0.290	0.285**	-0.282	-0.267	-0.310
	[0.166]	[0.095]	[0.167]	[0.166]	[0.174]
College +	0.016	0.262***	0.040	0.051	0.081
	[0.145]	[0.056]	[0.145]	[0.145]	[0.148]

(cont.) Supplementary Table S3. Results from Logistic Regression Models Predicting Onset of Cognitive Impairment, Adults aged 65+, by Different Measures of Offspring Education

	Share of college completion	Share of high school completion	Most educated child	Mean education	Education of eldest child
Constant	-12.583***	-12.247***	-12.266***	-12.140***	-12.320***
	[0.493]	[0.535]	[0.526]	[0.529]	[0.538]
AIC	68790.2	68796.6	66317.9	67194.9	63358.2
BIC	69482.4	69488.8	66981.1	67859.0	64018.3

Source: *HRS, 2000-12*

Note: All models account for clustering at household level.

*** $p<.001$; ** $p<.01$; * $p<.05$