Grandfather and Grandson

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2

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Many health economists (and others) believe that "social capital" matters but are not sure how to operationalize the concept in theory or empirical research. This wide-ranging volume tackles social capital with the precision of economics, proposing explicit workable definitions and rigorous empirical tests. I particularly appreciate the careful linking of the recent work on social capital to long-standing ideas in economics about institutions, trust, and family.

Thomas G. McGuire
Professor, Department of Health Care Policy
Harvard Medical School

This is an excellent book. The authors exemplify the value of approaching complex issues from different disciplinary perspectives, applying economic perspectives to provide new insights into the relationship between social capital and health and its importance for individuals and society.

Martin McKee
Professor, Department of Health Services Research and Policy
London School of Hygiene and Tropical Medicine

This book is an important step forward on the path to conceptualising social capital and its multiple influences on people's health. The dimensions explored are relevant to scholarly work as well as policy making. Perhaps for the first time, this book provides a comprehensive account of the health gains that may derive from investment in social capital by individuals or governments.

Franco Sassi
Senior Health Economist
OECD, Paris

This book sheds new light on relationships that the typical health, labor, and family economists tend to overlook. For instance, would you have thought that marriage can be interpreted as demand for Social Capital? Or did you know that the birth of a handicapped child acts like a negative shock to Social Capital, causing fathers to engage in crime with increased probability? Or that 'Trust' declines from North to South not only between countries but within the United States as well? Of particular value are the several survey tables providing readers with a key to the recent literature. In short: Maximum learning per unit time...

Peter Zweifel
Professor, Department of Economics
University of Zurich

The Economics of Social Capital and Health

The Economics of Social Capital and Health

Edited by

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Motivation

- The family is a small society that produces social capital.
- Family relations are based on trust and reciprocity.
    - within family there is a level of cooperation that is hardly achieved in larger societies
    - within families many services of very high quality and high value are provided

- One of such services is grandchild care provided by grandparents

Motivation

- High value of grandchild care to parents:
    - available off business hours
    - in weekends
    - when needed
    - love / empathy (high quality)
    - it is free

- Grandchild care cons:
    - grandparents are not professional educators
    - reduced socialization with other children

- Cost of childcare to grandparents:
    - childcare has an opportunity cost to grandparents (the value of their time)

Research question

- Is there also a health cost of grandchild care?

- … i.e. is grandchild care beneficial or detrimental to grandparents' physical and mental health?
  - dealing with children
    - offers grandparents additional opportunities for physical activity
    - helps maintaining mentally active
    - gives grandparents a "useful role"

    - especially intensive (every-day) care could demand too much energies and physical resources
    - could be stressful if grandparents were totally responsible for their grandchildren
    - divert time and resources from health maintenance (less time to see the doctor, for screening, for meeting friends, for leisure)

Literature

- early literature on gerontology (Fuller-Thompson & Minkler, 1997, 1999, 2001) focus on custodial grandparents in the US (extremely stressful situation: grandparents replace parents):
  - negative effects on depression
  - on physical health

- effect on grandparents wellbeing (not health, but quality of life):
  - Deaton and Stone (2013): moderate negative effect

- more recent economic literature from China, Taiwan, Europe finds generally small positive effect or no effect
  - Ku et al. (2012) (self-reported health, mobility limitations, depressive symptoms)
  - Chen and Liu (2012) (self-reported health)
  - Grundy et al. (2012) (life satisfaction, mental health, depression)
  - Reinkowsky (2013) (physical and mental health)

Empirical Issue

- Grandchild care is the result of a process
  - it depends on the probability of having grandchildren, on the number of grandchildren
    - depends on preferences for fertility
    - depends on socioeconomic conditions
  - it depends on the matching grandparent-grandchild
    - there are more grandparents for each grandchild
    - grandparents health and economic conditions
    - grandparents availability (retired or not)
    - proximity
    - quality of the relationship btw grandparents and parents

- Grandchild care is not randomly distributed, rather **grandparents self-select in and are selected for childcare**

- Grandparents who provide childcare are different
  - better physical and mental health

Solutions in the literature

- Selection on observables: early literature + Deaton and Stone (2013)
  - are there enough observables?

- propensity score matching (Reinkowsky, 2013)
  - not that different from selection on observables

- longitudinal analysis: controlling for baseline conditions (Grundy et al. 2012; Reinkowsky, 2013)
  - but lagged health conditions could be related to the factors which make current health better or worse

Solutions in the literature

- IV estimates
    - Ku et al. (2012): number of grandchildren and marital status of children
    - Reinkowsky (2013): gender of firstborn child

- Drawbacks:
    - number of grandchildren / children marital status could be non-excludable
        - These instruments base on the assumption, that children do not take the provision of grandchild care by their parents into account, when deciding on their fertility.
    - gender of firstborn child could affect the desire for a second child (relevance) but females provide better guarantees of future support → better health and less stress

The proposed solution

- Difference-in-differences
  - track grandparents from t=1 to t=3
  - compare trends in health outcomes between two groups:
  - grandparents who did not look after their grandchildren in any period (ageing effect)
  - grandparents who did not look after their grandchildren in the first two periods but did in the third period (ageing effect + GC caring effect)

group 1

group 2

t=1   t=2   t=3

The proposed solution

- Whatever are the time-invariant characteristics that determine selection into GC care, the DID accounts for them.

- DID estimates
  - do not depend on initial conditions
  - depend on parallel/common trends

The proposed solution

- Consider the model:

$$y_{it} = \alpha_0 + \alpha_1 L_i + \alpha_2 T_t + \alpha_3 L_i * T_t + X_{it}\beta + \mu_i + \varepsilon_{it}$$

The proposed solution

$$E(y_{it}|L_i = 0, T_t = 1, X) - E(yit|L_i = 0, T_t = 0, X) =$$

Trend in Group 1

$$= (\alpha_0 + \alpha_2 + X\beta + E(\mu_i|L_i = 0, T_t = 1, X)) - (\alpha_0 + X\beta + E(\mu_i|L_i = 0, T_t = 1, X)) =$$

$$= \alpha_2$$

$$E(y_{it}|L_i = 1, T_t = 1, X) - E(y_{it}|L_i = 1, T_t = 0, X) =$$

Trend in Group 2

$$= (\alpha_0 + \alpha_1 + \alpha_2 + \alpha_3 + X\beta + E(\mu_i|L_i = 1, T_t = 1, X))$$
$$- (\alpha_0 + \alpha_1 + X\beta + E(\mu_i|L_i = 1, T_t = 1, X)) =$$

$$= \alpha_2 + \alpha_3$$

The last equality is guaranteed by the fact that μ_i is time-invariant and exactly the same persons belong to each group at all times. Overtime differencing eliminates the contribution of the unobservables.

Common trend assumption

- identification achieved only if tends were common between group 1 and group 2 if group 2 did not look after grandchildren

- to provide evidence supporting this assumption, I estimate model (1) only over t=1 and t=2, when both groups do not look after grandchildren by assumption

Data

- SHARE (Survey of Health, Ageing and Retirement in Europe)
- representative sample of seniors aged 50 and over
- includes up to 20 European countries plus Israel (11 in the first wave)
- panel composed of three waves
  - wave 1: 2004/05
  - wave 2: 2006/07
  - wave 4: 2011/12

- retrospective data SHARELIFE
  - wave 3: 2009

- detailed information on physical and mental health, household composition, use of time
- retrospective data on family background at age 10

Variables of interest

- Did you look after grandchildren regularly or occasionally in the past 12 months (or since the last interview)?
  - very precise compared to other surveys

- On average, how often did you look after the children in in the past 12 months (or since the last interview)? Was it...
  - almost daily
  - almost every week
  - almost every month
  - less often

country	look after (full sample)	look after (conditioned on having grandchilds)	look after almost daily (conditioned on having grandchilds)
Austria	0.26	0.43	0.08
Belgium	0.39	0.60	0.10
Denmark	0.40	0.60	0.02
France	0.36	0.54	0.05
Germany	0.30	0.45	0.06
Italy	0.29	0.48	0.24
Netherlands	0.42	0.63	0.02
Spain	0.26	0.39	0.15
Sweden	0.45	0.57	0.02
Switzerland	0.28	0.54	0.04
Czech Republic	0.38	0.48	0.10
Estonia	0.29	0.39	0.06
Hungary	0.35	0.49	0.12
Poland	0.35	0.42	0.16
Portugal	0.28	0.41	0.17
Slovenia	0.32	0.45	0.16

Samples

- only subjects interviewed 4 times (3 times in the panel) are included

- group 1: individuals who reported to look after grandchilds in NO period
    - (this group includes also individuals who have no grandchilds or no children)

- group 2: individuals who report to look after grandchilds only in period 3

	Male	Female	Total
group 1	6,222	7,371	13,593
group 2	1,494	1,368	2,862
Total	7,716	8,739	16,455

Note: only one subject in the household answers to the question about looking after grandchildren. Her answer is imputed to the partner.

Data

- outcome variables:
  - dummies:
    - depressed (EURO-D>3)
    - poor self reported health (very bad and bad)
    - any chronic disease
    - any mobility difficulty
    - any difficulty in activities of daily life
    - immediate recall (more than 4 words out of 10)
    - delayed recall (more than 4 words out of 10)
    - overweight or obese
    - smoke
    - any (vigorous) sport activity
    - hospitalized in the past 12 months
    - visit doctor more than 6 times last year
  - continuous:
    - CASP (Wellbeing index ranged between 12 and 48)

Control variables

- time invariant:
  - education (ISCED level)
  - family background at age 10
  - self-assessed relative ability in maths and language at age 10

- time varying
  - age
  - active vs retired/inactive
  - number of children
  - number of grandchildren
  - number of parents alive
  - married
  - partner's age
  - family income (deciles)

Results

- to start with: look at simple OLS based on cross section (t=3)

outcome	female	male
depressed	-0.017***	-0.016***
poor health	-0.046***	-0.046***
chronic d.	0.022***	0.015**
mobility	-0.047***	-0.045***
ADL	-0.032***	-0.026***
immediate recall	0.041***	0.044***
delayed recall	0.039***	0.019***
overweight	0.01	0.009
smoke	-0.002	-0.009
sport	0.056***	0.063***
hospital	-0.019***	-0.006
doctor	-0.019***	-0.015**
CASP	0.744***	0.574***

Results

- Now DID estimates:

DID Females

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) over	(9)	(10)	(11)	(12)	(13)
VARIABLES	depressed	poorhealth	chronicd	mobility	ADL	R1	R2	weight	smoke	sport	hospital	doctor	CASP
wave 3 (Tt)	0.018*	0.027**	0.013	0.038***	0.033***	0.037***	0.046***	-0.012	0.041***	-0.007	0.010	-0.005	0.257
	(0.011)	(0.011)	(0.010)	(0.010)	(0.008)	(0.011)	(0.011)	(0.009)	(0.006)	(0.012)	(0.010)	(0.011)	(0.157)
group 2 (Li)	-0.012	-0.033*	-0.021	-0.036**	-0.002	-0.003	-0.022	-0.027	-0.022	-0.019	-0.018	-0.037*	0.734**
	(0.020)	(0.019)	(0.022)	(0.018)	(0.010)	(0.016)	(0.019)	(0.025)	(0.018)	(0.020)	(0.012)	(0.020)	(0.303)
group 2 * wave 3 (Li*Tt)	-0.001	-0.048**	0.015	-0.026	-0.029*	0.035	0.079***	-0.001	-0.037***	0.026	-0.010	-0.027	-0.082
	(0.024)	(0.022)	(0.023)	(0.021)	(0.015)	(0.022)	(0.025)	(0.018)	(0.014)	(0.027)	(0.019)	(0.023)	(0.327)
Observations	8,739	8,739	8,739	8,712	8,715	8,739	8,739	8,208	8,700	8,505	8,703	8,604	4,947
R-squared	0.059	0.133	0.119	0.173	0.102	0.284	0.234	0.067	0.072	0.163	0.033	0.114	0.235
Average outcome	0.313	0.359	0.685	0.351	0.125	0.638	0.383	0.522	0.137	0.426	0.142	0.345	37.70
test of common trend (group 2 * wave 2)	**0.028**	**0.006**	**0.002**	**0.011**	**0.004**	**-0.005**	**-0.004**	**0.001**	**-0.002**	**0.005**	**0.028**	**-0.003**	**0.140**
	(0.026)	(0.023)	(0.024)	(0.021)	(0.013)	(0.023)	(0.029)	(0.019)	(0.011)	(0.030)	(0.020)	(0.024)	(0.360)

DID Males

VARIABLES	(1) depressed	(2) poorhealth	(3) chronicd	(4) mobility	(5) ADL	(6) R1	(7) R2	(8) over weight	(9) smoke	(10) sport	(11) hospital	(12) doctor	(13) CASP
wave 3 (Tt)	0.028***	0.063***	0.028**	0.052***	0.047***	0.053***	0.076***	0.004	0.028***	0.013	0.019*	0.027**	0.125
	(0.010)	(0.011)	(0.011)	(0.010)	(0.008)	(0.012)	(0.012)	(0.010)	(0.008)	(0.013)	(0.011)	(0.012)	(0.160)
group 2 (Li)	-0.024*	-0.006	-0.024	-0.010	0.005	0.036**	-0.008	-0.011	0.023	0.064***	-0.004	0.003	0.164
	(0.014)	(0.018)	(0.022)	(0.014)	(0.009)	(0.017)	(0.018)	(0.023)	(0.020)	(0.020)	(0.012)	(0.017)	(0.283)
group 2 * wave 3 (Li*Tt)	0.006	-0.026	0.015	-0.026	-0.041***	-0.006	0.042*	0.035*	-0.015	0.007	-0.019	-0.005	0.399
	(0.018)	(0.023)	(0.023)	(0.019)	(0.014)	(0.024)	(0.024)	(0.019)	(0.017)	(0.025)	(0.020)	(0.025)	(0.296)
Observations	7,716	7,716	7,716	7,689	7,692	7,716	7,716	7,422	7,638	7,587	7,665	7,587	4,626
R-squared	0.044	0.128	0.086	0.143	0.067	0.234	0.171	0.034	0.063	0.117	0.041	0.114	0.172
Average outcome	0.159	0.286	0.637	0.210	0.0823	0.601	0.297	0.647	0.195	0.530	0.140	0.277	38.75
test of common trend (group 2 * wave 2)	**-0.022**	**-0.030**	**0.020**	**-0.016**	**0.007**	**0.017**	**0.036**	**-0.019**	**-0.006**	**0.033**	**0.006**	**-0.036**	**-0.120**
	(0.020)	(0.020)	(0.025)	(0.018)	(0.012)	(0.026)	(0.027)	(0.019)	(0.015)	(0.027)	(0.021)	(0.023)	(0.310)

Issue: time-varying shock

- what if… grandchildren were assigned to grandparents after grandparents have experienced a positive and unexpected health shock?

- reversed causation: better grandparents' health → grandchild care

- However, the effect on doctor visits and hospitalization plays against this possibility
  - if grandparents were better they should see less often their doctor

Issue: retirement

- what if… GC are entrusted to a given grandparent because (or after that) that grandparent has retired?

- if so, is it retirement or GC caring influencing grandparent health?
  - I control for retirement in the model: feasible because I observe retired grandparents in both Group 1 and Group 2.

Effect of childcare by intensity

- Is the effect of childcare on grandparents' health depending on the intensity of childcare?

- Two levels:
  - at least once a week (i.e. almost daily or almost every week)
  - less often (i.e. almost every month, less often)
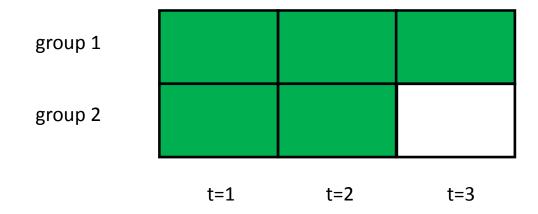
DID Females – high intensity

VARIABLES	(1) depressed	(2) poorhealth	(3) chronicd	(4) mobility	(5) ADL	(6) R1	(7) R2	(8) over weight	(9) smoke	(10) sport	(11) hospital	(12) doctor	(13) CASP
wave 3 (Tt)	0.019*	0.027**	0.015	0.037***	0.033***	0.037***	0.044***	-0.011	0.041***	-0.004	0.012	-0.006	0.283*
	(0.011)	(0.011)	(0.010)	(0.011)	(0.008)	(0.011)	(0.011)	(0.009)	(0.006)	(0.012)	(0.010)	(0.011)	(0.159)
group 2 (Li)	-0.016	-0.037	-0.018	-0.044*	0.016	-0.026	-0.016	-0.025	-0.032	-0.042	-0.017	-0.043*	0.908**
	(0.026)	(0.026)	(0.029)	(0.024)	(0.015)	(0.023)	(0.026)	(0.033)	(0.023)	(0.026)	(0.015)	(0.026)	(0.396)
group 2 * wave 3 (Li*Tt)	0.002	-0.029	-0.009	-0.028	-0.060***	0.060*	0.057*	-0.020	-0.029	0.057	-0.006	-0.006	-0.231
	(0.034)	(0.031)	(0.031)	(0.028)	(0.020)	(0.031)	(0.034)	(0.024)	(0.018)	(0.037)	(0.024)	(0.033)	(0.491)
Observations	8,058	8,058	8,058	8,034	8,037	8,058	8,058	7,557	8,019	7,830	8,025	7,929	4,539
R-squared	0.059	0.128	0.121	0.172	0.102	0.279	0.232	0.067	0.075	0.163	0.032	0.113	0.233
Average outcome	0.318	0.371	0.693	0.363	0.131	0.623	0.369	0.527	0.135	0.416	0.146	0.356	37.53
test of common trend (group 2 * wave 2)	0.027	-0.021	-0.030	0.024	0.009	-0.006	0.019	-0.034	-0.010	-0.016	0.009	0.019	0.205
	(0.038)	(0.031)	(0.033)	(0.029)	(0.019)	(0.031)	(0.040)	(0.027)	(0.015)	(0.041)	(0.027)	(0.034)	(0.487)

DID Females – low intensity

VARIABLES	(1) depressed	(2) poorhealth	(3) chronicd	(4) mobility	(5) ADL	(6) R1	(7) R2	(8) over weight	(9) smoke	(10) sport	(11) hospital	(12) doctor	(13) CASP
wave 3 (Tt)	0.020*	0.025**	0.012	0.040***	0.033***	0.037***	0.046***	-0.013	0.041***	-0.007	0.010	-0.004	0.278*
	(0.011)	(0.011)	(0.010)	(0.011)	(0.008)	(0.011)	(0.011)	(0.009)	(0.006)	(0.012)	(0.010)	(0.011)	(0.158)
group 2 (Li)	-0.011	-0.032	-0.026	-0.028	-0.022**	0.024	-0.029	-0.028	-0.019	0.002	-0.016	-0.034	0.595
	(0.027)	(0.024)	(0.030)	(0.023)	(0.011)	(0.020)	(0.027)	(0.034)	(0.025)	(0.027)	(0.016)	(0.026)	(0.402)
group 2 * wave 3 (Li*Tt)	0.001	-0.072***	0.041	-0.027	-0.000	0.006	0.102***	0.019	-0.042**	-0.007	-0.014	-0.045	-0.049
	(0.031)	(0.027)	(0.033)	(0.028)	(0.020)	(0.027)	(0.033)	(0.023)	(0.020)	(0.037)	(0.027)	(0.030)	(0.378)
Observations	8,040	8,040	8,040	8,013	8,016	8,040	8,040	7,551	8,001	7,806	8,004	7,917	4,536
R-squared	0.060	0.133	0.119	0.173	0.104	0.284	0.238	0.066	0.072	0.166	0.033	0.115	0.227
Average outcome	0.315	0.366	0.693	0.362	0.129	0.631	0.375	0.523	0.137	0.420	0.147	0.350	37.67
test of common trend (group 2 * wave 2)	0.026	0.032	0.033	-0.007	-0.005	0.000	-0.031	0.030	0.006	0.024	0.046 *	-0.027	0.090
	(0.033)	(0.031)	(0.033)	(0.029)	(0.015)	(0.031)	(0.040)	(0.024)	(0.016)	(0.040)	(0.028)	(0.032)	(0.493)

Temporary or permanent?

- Consider two alternative groups
    - group 3: individuals who reported to look after GC in all periods
    - group 4: individuals who reported to look after GC in periods 1 and 2 but not in period 3

Temporary or permanent

- group 4 includes the case of GC that grow up and do not need care anymore
  - this is a fully expected outcome. GC might change their behavior even before GC leave. If so, the common trend assumption would be at risk

- group 4 includes the case of parents who are exhausted and decide to stop childcare
  - again, common trend at risk: for these grandparents health decline could be steeper

Temporary - Females

VARIABLES	(1) depressed	(2) poorhealth	(3) chronicd	(4) mobility	(5) ADL	(6) R1	(7) R2	(8) over weight	(9) smoke	(10) sport	(11) hospital	(12) doctor	(13) CASP
wave 3 (Tt)	0.031**	0.032**	0.035**	0.028**	0.004	0.030**	0.090***	-0.003	0.034***	-0.049***	0.012	-0.014	0.066
	(0.015)	(0.015)	(0.016)	(0.014)	(0.008)	(0.015)	(0.018)	(0.013)	(0.009)	(0.018)	(0.013)	(0.016)	(0.199)
group 4 (Li)	0.039*	0.035	0.028	0.002	-0.002	-0.031*	-0.025	0.023	0.046**	-0.023	0.027*	0.019	-0.371
	(0.021)	(0.022)	(0.023)	(0.020)	(0.011)	(0.018)	(0.021)	(0.027)	(0.019)	(0.023)	(0.015)	(0.021)	(0.311)
group 4 * wave 3 (Li*Tt)	0.014	0.063**	-0.035	0.059**	0.064***	-0.002	-0.020	-0.034*	0.009	-0.035	0.011	0.020	-0.729**
	(0.026)	(0.025)	(0.023)	(0.024)	(0.018)	(0.024)	(0.027)	(0.019)	(0.013)	(0.029)	(0.024)	(0.026)	(0.343)
Observations	5,046	5,046	5,046	5,037	5,037	5,046	5,046	4,833	5,022	5,001	5,031	5,001	3,066
R-squared	0.081	0.109	0.089	0.102	0.054	0.231	0.169	0.065	0.075	0.095	0.026	0.102	0.221
Average outcome	0.270	0.280	0.683	0.256	0.0653	0.739	0.440	0.578	0.135	0.512	0.133	0.308	38.58
test of common trend (group 4 * wave 2)	-0.001	0.014	0.050**	-0.012	0.012	-0.024	-0.069**	-0.038*	0.011	-0.078**	-0.027	-0.035	-1.138***
	(0.028)	(0.025)	(0.024)	(0.026)	(0.016)	(0.028)	(0.029)	(0.020)	(0.011)	(0.032)	(0.025)	(0.029)	(0.352)

Temporary - Males

VARIABLES	(1) depressed	(2) poorhealth	(3) chronicd	(4) mobility	(5) ADL	(6) R1	(7) R2	(8) over weight	(9) smoke	(10) sport	(11) hospital	(12) doctor	(13) CASP
wave 3 (Tt)	0.015	0.008	0.035*	0.004	0.010	0.005	0.089***	0.046***	0.015	0.022	0.012	0.004	0.007
	(0.015)	(0.018)	(0.020)	(0.016)	(0.011)	(0.019)	(0.021)	(0.016)	(0.013)	(0.022)	(0.019)	(0.020)	(0.237)
group 4 (Li)	-0.009	0.043*	0.029	0.003	0.000	-0.034	-0.029	0.031	0.038	-0.012	0.015	0.050*	0.015
	(0.020)	(0.025)	(0.029)	(0.021)	(0.016)	(0.024)	(0.024)	(0.031)	(0.025)	(0.029)	(0.019)	(0.026)	(0.389)
group 4 * wave 3 (Li*Tt)	0.001	0.036	-0.026	0.082***	0.043*	-0.011	-0.011	0.008	0.019	-0.043	0.005	0.045	-0.702*
	(0.026)	(0.032)	(0.031)	(0.029)	(0.024)	(0.035)	(0.033)	(0.024)	(0.019)	(0.035)	(0.032)	(0.035)	(0.419)
Observations	3,204	3,204	3,204	3,183	3,183	3,204	3,204	3,132	3,171	3,168	3,177	3,177	1,965
R-squared	0.054	0.110	0.059	0.092	0.060	0.184	0.143	0.067	0.080	0.070	0.046	0.112	0.158
Average outcome	0.133	0.247	0.687	0.169	0.0726	0.684	0.337	0.670	0.165	0.577	0.157	0.266	39.36
test of common trend (group 4 * wave 2)	-0.027	0.020	0.034	0.047	0.001	0.111***	-0.014	0.024	-0.009	-0.008	-0.051	0.018	-0.419
	(0.027)	(0.032)	(0.032)	(0.029)	(0.019)	(0.038)	(0.036)	(0.026)	(0.019)	(0.039)	(0.033)	(0.032)	(0.428)

Summing up

- Strong evidence of the importance of self-selection and of the risk of finding spurious correlations

- (Some) evidence of a protective role of childcare on grandparents' health, more evident among females
  - for both males and females
    - less difficulty in activities of daily life
    - better delayed recalling

  - among females
    - better self-reported health
    - less smoking

Summing up

- (Some) evidence of stronger effects for low-intensive childcare
    - same pattern as in the "undistinguished" case, but stronger effects
    - however the high-intensive childcare seems to have a stronger effect on ADL

- (Some) evidence that the beneficial effect is temporary
    - although the common trend assumptions sometimes fails

Policy implications

Taking results up-front:

- Policies to facilitate grandchild care
  - flexible working hours or part-time for active elderly

- Avoid intensive caring
  - favor a better mix of formal care and care from grandparents in suitable ways

- Offer grandparents brief courses with a few elements of pedagogy and psychology

Further research

- extend analysis by using the upcoming fifth wave of SHARE
  - better common trend test
  - more opportunities of testing whether the effect is temporary

- More attention on the role of retirement
  - what if... retirement were an outcome of a request for grandchild care?
    - in this case "the retired dummy" would be a bad control

- Further tests on possible contemporaneous treatments
  - after all there are five years between t=2 and t=3