

*Grandfather and grandson*  
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## MOTIVATIONS

- ▶ The proportion of grandparents who report to look after their grandchildren varies between 39 percent (Estonia) to 63 (Netherlands) in SHARE countries, 53 percent in France
  - ▶ Increasing proportion of women participate to the labor market  $\Rightarrow$  increasing demand for child care
  - ▶ Ageing population and increasing proportion of retired seniors  $\Rightarrow$  increasing supply for child care
- ▶ High value of grandchild care
- ▶ But grandparents are not professionals + opportunity cost (renouncement to monetary and non-monetary activities)

# RESEARCH QUESTIONS

- ▶ **How does grandchild care affect health of seniors?**
  - ▶ Is grandchild care detrimental to health? No consensus in literature.
  - ▶ What kind of health is affected? Mental/physical?
  - ▶ Which category of the population is the most impacted? Men/Women?
  - ▶ Is there an effect of the intensity of the treatment (child care)?
  - ▶ Temporary or permanent effect?

# LITERATURE

- ▶ Concerning the effect of grandchild care on health, there is no consensus:
  1. Child care may increase physical and mental health
    - ▶ Ku et al, 2012; Chen and Liu, 2012; Grundy et al, 2012; Reinkowsky, 2013
  2. Child care may involve stress and strain detrimental to health.
    - ▶ Fuller-Thomson and Minker, 1997, 1999, 2001 find negative effect on depression and physical health but focus on custodial grandparents in the US, external validity?
    - ▶ Deaton and Stone, 2013 negative effect on quality of life
- ▶ **Issue:**
  - ▶ Selection  $\Rightarrow$  Grandchild care is not exogenous, grandparents select themselves in grandchild care and are selected (by parents) for child care.
  - ▶ There is a problem of reverse causality : health status determines/influences the decision to take care of their grandchildren.
  - ▶  $\Rightarrow$  Thus grandparents who provide child care are in better health.

## A DIFFERENCE-IN-DIFFERENCES APPROACH (1)

- ▶ **Identification strategy:** the author uses a difference-in-differences method to compare the health evolution between two groups:
  - ▶ **Treated group** (group 2): individuals who look after their grandchildren in the third period ( $t=3$ ) but not in the first two periods ( $t=1$  and  $t=2$ )
  - ▶ **Control group** (group 1): individuals who do not provide grandchild care in three consecutive periods ( $t=1, t=2, t=3$ )
- ▶ The author uses the differentiated treatment (=grandchild care) between two groups
- ▶ **Data: SHARE**

## A DIFFERENCE-IN-DIFFERENCES APPROACH (2)

- ▶ The author estimates:  $Y_{it} = \alpha_0 + \alpha_1 L_i + \alpha_2 T_t + \alpha_3 T_t \times L_i + X_{it} + u_{it} + \varepsilon_i$
- ▶  $\alpha_3$  is the treatment effect : variation in health due to the treatment
- ▶ Common trend assumption
  - ▶ Without child care, differences in health between the two last periods (t=2 and t=3) would have been the same in each group (the two first periods allow to conduct a placebo test).
  - ▶ No other shock impacted health of a specific group (retirement?).
- ▶ **Is the control group credible?**
- ▶ **Placebo test** : to provide evidence supporting common trend assumption, the author estimates the model only over t=1 and t=2, when both groups do not look after grandchildren by assumption  $\Rightarrow$  very convincing

## RESULTS (1)

- ▶ First naive approach (OLS) shows a strong correlation between health outcomes and looking after grandchildren  $\Rightarrow$  endogenous selection
- ▶ DiD approach  $\Rightarrow$  some evidence of protective role of child care on grandparents' health
- ▶ By gender : more evidence among women
  - ▶ for both men and women : less difficulty in daily life activities and better delayed recalling
  - ▶ for women : better self-reported health and less smoking

## RESULTS (2)

- ▶ Effects of grandchild care by intensity?
  - ▶ High intensity (at least once a week = almost daily or almost every week)
  - ▶ Low intensity (less often = almost every month, less often)
  - ▶ You conduct these regressions only for women, is there no effect for men?
- ▶ Temporary or permanent effect
  - ▶ Group 3 : individuals who reported look after their grandchildren in all periods
  - ▶ Group 4 : individuals who reported look after their grandchildren in  $t=1$  and  $2$  but not in  $t=3$   $\Rightarrow$  this group includes the case of grandparents who are exhausted and decide to stop grandchild care.
    - $\Rightarrow$  It is the case for women, why is it different for men?
  - ▶ Placebo tests are not convincing, grandparents may expect their grandchildren to grow up (and won't need care from them) between periods  $t=1$  and  $t=2$ .
    - $\Rightarrow$  Do you have grandchildren's age to control for this variable?

## ABOUT THE DATABASE

- ▶ In the paper, the author uses only individuals who were interviewed in all 4 years so people are selected. Is it a source of bias?
- ▶ Placebo analyses have not been conducted on the same duration than the main one.
  - ▶  $t = 1$ : wave 1 (2004–2005)
  - ▶  $t = 2$ : wave 2 (2006–2007)
  - ▶  $t = 3$ : wave 4 (2011–2012)

How does it affect the results?

- ▶ Wave 3 = SHARELIFE gathers retrospective information on household composition, job history, etc.  $\Rightarrow$  You might have access to the age of grandchildren, the retirement date?

# RETIREMENT

- ▶ Issue: retirement may affect health. People are retired that's why they are available to take care of their grandchildren and you estimate the effect of retirement on health
- ▶ Possible to provide fraction retired for each group?
- ▶ Focus on individuals still working and analyze the health effect of grandchild care?
- ▶ Conduct regressions by age groups? Before/after retirement?

## EXTENSIONS

- ▶ Temporary or permanent effect by intensity?
  - ▶ Group 3: individuals who are reported to look after grandchild care at least once a week (respectively less often) in all periods
  - ▶ Group 4: individuals who are reported to look after grandchild care at least once a week (respectively less often) in periods 1 and 2 exclusively
- ▶ Conduct the regression by countries group? proportion of grandparents who report to look after their grandchildren varies by country
- ▶ Tobit model? To estimate the probability to participate to child care

# CONCLUSION

- ▶ Very interesting paper
- ▶ Policies to facilitate grandchildren care:
  - ▶ Increase in seniors' health  $\Rightarrow$  decreases health expenditures  
 $\Rightarrow$  Benefit for health insurance.
  - ▶ Facilitate parents participation on the job market (grandparents are available, love/empathy, it is free)
  - ▶ Increase grandparents social participation to make them happier
- ▶ Short term and/or long term effects  $\Rightarrow$  impact on life expectancy?