

**THE ROLE OF FAMILY TIES AND CULTURAL DIFFERENCES IN EXPLAINING THE
RELATIONSHIP BETWEEN THE PROVISION OF INFORMAL CARE AND THE
INFORMAL CAREGIVERS WELL-BEING**



C. Di Novi

*Department of Economics,
Università Ca' Foscari (Venice).*

*Laboratory for Comparative Social Research
National Research University "Higher School of Economics", Moscow*



Introduction

- ✓ Europe is getting older...
- ✓ Formal care vs Informal care
- ✓ Southern European Model of care (strong family ties);
- ✓ Northern European Model of care (weak family ties).



Aims

The aim of this project is to estimate the impact of constant caring for elderly parents (biological parents, parents in law and step-parents) on the self- assessed health, mental health, and quality of life, of carers between the ages of 50 and 75.

I'll test whether this relationship differs across European regions according to a North– Continental- East- South gradient.

- ✓ evidence of cultural and LTC differences between Northern, Continental, Eastern and Southern Europe which motivate such a focus.

Aims

I will split the sample by gender:

- ✓ women continue to play a major role in running the household and giving care to family members. Women are therefore more exposed than men to the stress generated by informal caregiving.
- ✓ Furthermore, as the literature shows, men react differently than women to stressful experiences, and provide informal care in forms that are different from women (see Brenna and Di Novi, 2015; Di Novi et al., 2015).

Data

The empirical investigation will be performed using a representative sample drawn from the SHARE (Survey of Health, Ageing and Retirement in Europe) survey:

- Wave 1 (2004),
- Wave 2 (2006/2007),
- Wave 4 (2011) and
- Wave 5 (2013).

Countries: Austria, Germany, Sweden, Netherlands, Spain, Italy, France, Denmark, Greece, Switzerland, Belgium, the Czech Republic, and Poland.

Constant Care

Adult children that provided care to someone living outside the household also reported information about the frequency of this care: almost daily, almost every week, almost every month, less often.

In order to get closer to a definition of informal care in contrast to occasional help, I'll select personal help being provided on an almost weekly or almost daily basis.

For those that reported to have provided care to an elderly parent living in the same household, it has to be daily because a daily filter is included in the opening question.

The Northern, Continental, and Southern/Eastern sub-samples

I'll split the sample into three macro-regions, namely, Northern, Central and Southern/Eastern Europe adopting a *care regime cluster* approach that falls midway between the traditional Esping-Andersen approach (1990) and the countries classification carried out by Bettio and Plantenga (2004).

I would model care regime clusters according to the role of informal care, the different care policies across Europe and the amount of resources destined by each country to Long Term Care (LTC).

The Northern, Continental, and Southern/Eastern sub-samples

The first cluster concerns Northern countries, commonly referred also as weak family-ties countries, in which informal care plays a modest role (Reher, 1998).

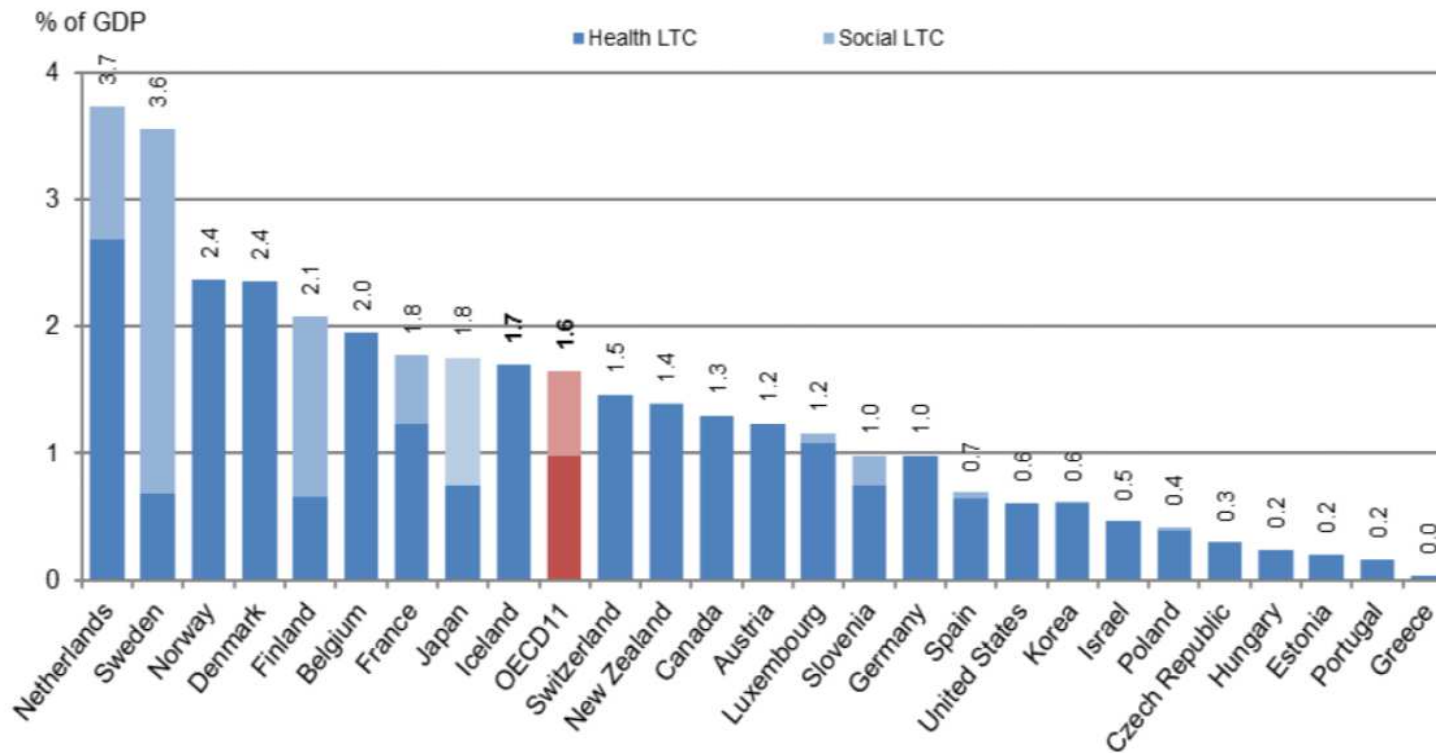
Here the management of care is mainly delegated to the public sector.

Denmark, Sweden and the Netherlands have been included in the first cluster.

They have in common generous and universal long-term care systems: they spend respectively 2.4%, 3.6% and 3.7% of their GDP on long term care.

LTC

Figure 1. Long-term care public expenditure (health and social components), as share of GDP, 2011 (or nearest year)



Note: The OECD average only includes the 11 countries that report health and social LTC.

Source: *OECD Health Statistics 2013*, <http://dx.doi.org/10.1787/health-data-en>.

The Northern, Continental, and Southern/Eastern sub-samples

A second cluster includes the Southern/Eastern countries, commonly referred as strong family-ties countries.

Southern and Eastern Europe (with reference to countries included in SHARE) are characterized by high indexes of informal care which plays a pivotal role in its societies.

With reference to these characteristics and to OECD data on LTC expenditure (as a share of GDP), I would group together Southern European countries (Italy, Spain and Greece) and Eastern Countries (Poland Czech Republic) and where overall long-term care provision is mainly based on family resources to a greater extent than in other OECD countries.

The Northern, Continental, and Southern/Eastern sub-samples

In between these two extremes, a *third cluster*, the Continental countries (Austria, France, Germany, Switzerland, Belgium) characterized by medium positions in formal and informal care.

Health Variables

1. Self-assessed health (**SAH**);

2. Functional indicator of QoL, the **CASP-12** - a self-reported index built on a 12 item questionnaire organized in four-point Likert ascending scales.

CASP-12 captures four dimensions of QoL:

- ✓ control (C),
- ✓ autonomy (A),
- ✓ self-realisation (S)
- ✓ and pleasure (P).

The first letter of each domain and its 12 items create the acronym **CASP-12**. It provides an easily interpretable score ranging from 12 to 48, with higher scores indicating better QoL.

Mental Health

3. Mental health was measured in terms of the EURO-D scale.

This is a scale for measuring depression that was developed and validated by the EURODEP *Concerted Action Programme*.

It consists of 12 elements connected to psychological health: depression, pessimism, wanting to die, guilt complexes, sleeping difficulties, lack of interests, irritability, lack of appetite, fatigue, lack of concentration, inability to take pleasure from normal activities and a tendency to crying. Each item is of equal weighting and reported with a 0 if the symptom is absent and a 1 when it is present.

I'll focus on the clinical definition of depression as indicated by the EURO-D scale with a clinically defined cut-off point at four symptoms identifying the respondent as depressed, i.e. having severe mental health problems (Prince *et al.*, 1999).

Empirical Strategy

Informal caregivers may differ substantially from who do not provide care for the elderly parents;

This potential endogeneity problem can be corrected by matching each informal caregiver with a non-caregiver on each characteristic known to be associated with informal caregiver status and well-being (Caliendo & Kopeinig, 2008).

In this project I'll perform this matching by using Propensity Score (PS), as formalized by Rosenbaum and Rubin (1983).

Empirical Strategy

Once the propensity score is computed, the matching is carried out through algorithms which form "statistical twins" that differ only in their caregiver status and not in other observed characteristics in order to account for self-selection.

Kernel and Radius (with caliper 0.5) matching were chosen as the matching algorithms.

These techniques use the maximum amount of data and, in the case of Radius matching, the imposition of a tolerance threshold avoids the risk of bad matches (Caliendo and Kopeinig, 2008; Imbens and Wooldridge, 2008).

Empirical Strategy

Finally, well-being of matched individuals is then compared to estimate the average effect of the provision of informal care.

Specifically, we are interested in the average effect of the treatment on the treated (ATT).

First Results: Women vs Men Mental Health

I started with using data from second wave of SHARE which was collected by personal interviews between the end of 2006 and the summer of 2007

We include lagged information from the first wave of the same survey collected in 2004.

Probit Model for Propensity Score

We first compute the propensity score through a **probit model**.

The **dependent variable** is a dummy indicator that is equal to zero if the respondent does not provide care to elderly parents and one if he or she provides care.

Controls which could be associated with self-reported mental health and informal care giver conditions can be grouped in the following categories: demographic variables (age, country of residence), family composition (marital status, carers' children still living at home), socioeconomic variables (educational level, family income, employment status), information on parents receiving care (health status of the respondent's mother and father, last job of respondent's mother and father and geographical distance between the daughters and their parents).

Moreover, we controlled for respondent's self-reported probability of receiving an inheritance, respondent's well-being (sah, mental health and CASP separately) and caregiver status at the first wave.

Women vs Men

The sample contains 7774 individuals with at least one living parent at the moment of the interview. 2481 individuals have provided care to the elderly parents in the year of the interview, 64.25% of which are women.

First Results on Mental Health: Men

| | Kernel Matching | | Radius Matching | |
|---------------|-----------------|--------|-----------------|--------|
| | ATT | S.E. | ATT | S.E. |
| North | 0.0035 | 0.0244 | 0.0030 | 0.0245 |
| Centre | 0.0169 | 0.0215 | 0.0172 | 0.0215 |
| South | 0.0157 | 0.0281 | 0.015 | 0.0282 |

First Results on Mental Health: Women

| | Kernel Matching | | Radius Matching | |
|---------------|-----------------|-------|-----------------|-------|
| | ATT | S.E. | ATT | S.E. |
| North | -0.028 | 0.029 | -0.026 | 0.028 |
| Centre | 0.016 | 0.032 | 0.011 | 0.033 |
| South | 0.079** | 0.032 | 0.078** | 0.032 |

The North-South Gradient

The results reveal the presence of a North-South gradient **only for women:**

- ✓ providing assistance to one's elderly parents appears to have a not significant effect on depression in the North and Central Europe, while in the Mediterranean countries it increases the probability of suffering from mental health problem;
- ✓ a South-European caregiver has a 8% higher probability than a non-caregiver of suffering from depression.

Labour Intensive Care

It is plausible that positive consequences, such as rewards and satisfaction, may buffer the negative effects of caregiving (Walker et al., 1995).

This may happen especially in the Northern and Continental countries where, thanks to a stronger formal care system, a daughter can choose to assist an elderly parent for her own gratification (as opposed to being obliged by necessity).

This is particularly true for the less labour intensive domestic help, which can more easily be performed on a voluntary basis. In contrast, intensive care, the provision of which is often determined by the needs of the heavily dependent recipient, requires a balance between caregiving and other activities, such as child-care, leisure and work.

Labour Intensive Care

SHARE provides the possibility of distinguishing between domestic chores and more labour intensive personal care (such as bathing, body care, dressing).

We used this information to further investigate the potential impact that constant intensive care may have on the self-assessed mental health of carers.

Hence, we re-estimated our model by excluding from the sample women who help elderly parents with domestic chores only (14% of the sample). We computed the propensity score through a probit model for those who provide personal care to elderly parents, using the same specification as described before.

The sample included 3936 observations.

Labour Intensive Care

| | Kernel Matching | | Radius Matching | |
|---------------|-----------------|-------|-----------------|-------|
| | ATT | S.E. | ATT | S.E. |
| North | 0.003 | 0.057 | 0.004 | 0.046 |
| Centre | -0.035 | 0.047 | -0.061 | 0.049 |
| South | 0.098*** | 0.035 | 0.094*** | 0.035 |

Labour Intensive Care

As before, intensive informal care seems to have an adverse influence on psychological well-being of South-European caregivers:

- ✓ the ATT is higher (a caregiver has a 10% higher probability of a non-caregiver assessing her own mental health as bad) and more significant.

Actually, in Northern and Central Europe the ATT is not statistically different from zero.

Robustness Check

As a further check, we re-run the model by using as dependent variable in the probit model a different proxy of intensive/constant care. We employed the number of weekly hours dedicated to eldercare.

According to the existing literature, we defined three thresholds of care intensity: 10, 15 and 20 hours (OECD, 2011).

The results are consistent with those obtained from the model using personal care as proxy of intensive care.

Robustness Check

| | Kernel Matching | | Radius Matching | |
|---------------|-----------------|-------|-----------------|-------|
| | ATT | S.E. | ATT | S.E. |
| North | 0.071 | 0.057 | 0.0916 | 0.052 |
| Centre | 0.026 | 0.057 | 0.030 | 0.060 |
| South | 0.116** | 0.043 | 0.123** | 0.045 |

Preliminary Conclusions

Actually, caring significantly deteriorates women's mental health only in the countries belonging to the South macro area where the amount of resources allocated to finance LTC is minimal and the local system of health and social services for the elderly lacks the necessary structures to meet the increasing demand for elderly care services.

The attention of policymakers is henceforth to be focused on the Mediterranean countries, where the issue on eldercare policies has yet to be addressed.

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