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# 29 Early retirement, mental health and social networks

- Early retirement enables more leisure and relieves stressful job conditions
- But early retirement also accelerates cognitive decline
- This decline is related to fewer social contacts, especially with friends
- Social contacts are a side effect of employment that keeps workers mentally agile

## 29.1 Pleasant and unpleasant consequences of early retirement

This paper explores the inter-relationships between early retirement, mental health – including cognition and subjective well-being – and the size and composition of social networks among older people. We argue that early retirement has side effects on the retirees' social networks. These side effects appear to explain part of the accelerated cognitive ageing that occurs after early retirement.

Early retirement is popular in Europe. It is seen as a much appreciated social achievement which increases personal well-being, particularly among employees who suffer from work-related health problems. First introduced in the 1970s and 1980s, generous early retirement provisions in most European countries were instituted with few actuarial adjustments, if any (Gruber & Wise 1999). But times have changed since then. In response to the growth of the older segment of the population and to the precarious financial state of the public pension system, the costs of early retirement have come under increased scrutiny. This has led to a string of pension reforms in Europe, since the 1990s, reducing pay-as-you-go pension benefits and introducing multi-pillar pension systems with supplemental occupational and individual pensions, in addition to the traditional unfunded retirement insurance (Börsch-Supan 2012).

Despite the enormous increase in life expectancy all over Europe, policymakers are still largely unwilling to challenge the widely popular early and normal retirement ages. Politically speaking, reducing the generosity of early retirement is often seen as "touching the third rail," with a fatal shock delivered at the next election. A case in point is France, where a timid increase in the retirement age, from 60 to 62 years, was partially reverted after the most recent presidential elections.

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While many studies have addressed the macro connotations of early retirement, particularly its large costs, another body of literature has looked at the individual implications of early retirement. An immediate benefit from early retirement is the receipt of income support without the necessity to continue working, enabling individuals to enjoy more leisure. Moreover, early retirement relieves workers who feel constrained in their place of work, whether due to stressful job conditions or to work-impeding health problems. For such individuals, early retirement should manifest itself in an improvement of well-being and, potentially, also health. On the other hand, early retirement might also be harmful, because individuals who stop working may lose a purpose in life. This might, in turn, decrease subjective well-being and mental health.

Research on these issues is complicated by the fact that the measures of well-being and health which are commonly available in general purpose surveys may suffer from justification bias (Bound 1991). That is, early retirees may report worse health in order to justify their early exit from the workforce. Moreover, early retirement is not an exogenous outcome, but is likely to be related to ill health and lower cognitive abilities. For example, persons in bad health are likely to retire earlier but also to report worse life satisfaction. Finally, those that hope or believe that life satisfaction will increase after retirement are more likely to retire at any age. We thus face the usual task of disentangling cause and effect.

The separation of selection effects and reverse causality from the genuine impacts of early retirement on well-being and health requires advanced econometric techniques which sometimes make results controversial. The econometric problem is to find a counterfactual value for well-being and health had a person not taken early retirement. The usual instruments for identifying such a counterfactual are policy changes in early retirement rules, such as changes in the pensionable age or changes in the actuarial adjustments. SHARE is useful, in this respect, as it gives institutional variation across countries to provide the necessary counterfactual. Moreover, since SHARE is a panel, the data also include conditioning variables describing health and well-being in earlier stages of life.

Börsch-Supan and Jürges (2006), using the German Socio-Economic Panel data, found that individuals were less happy in the year of early retirement than in the years before and after retirement. Moreover, individuals generally attained their pre-retirement satisfaction levels relatively soon after retirement. Hence, the early retirement effect on well-being appears to be negative and short-lived rather than positive and long-lasting, similar to what occurs in the set point model of happiness by Clark et al. (2003). Charles (2002) studied the effect of retirement on depression and Lindeboom et al. (2002) studied the effect of retirement and other factors (a significant decrease in income, death of the spouse, disability and a move to a nursing home) on the mental health of individuals, using data from the Longitudinal Aging Study Amsterdam (LASA).

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A seminal paper by Adam et al. (2007) based on SHARE found that cognition – measured mainly by memory abilities such as delayed word recall – declined during retirement. This controversial finding has sparked an entire literature. While there are a few papers with the opposite result (Coe et al. 2012), most studies confirm the early findings (Bonsang et al. 2010, Rohwedder & Willis 2010, Mazzonna & Peracchi 2012) and show that the negative effect on cognition increases with the time in retirement. For a given age, early retirees suffer more from cognitive decline than later retirees, even after correcting for selection and reverse causality effects.

Why does retirement affect cognition and is cognitive decline a reason for declining health and well-being? These are the questions underlying the research in this paper. Its central hypothesis is derived from the anchoring function of employment. Work, even if unpleasant and arduous, provides social contacts. Even disliked colleagues and a bad boss, it may be assumed, are better than social isolation because they provide cognitive challenges which keep the mind active and healthy.

The current analysis takes advantage of a major innovation in SHARE Wave 4, the social network data based on a name generator which identifies those persons with whom the respondents "discuss things that are important to them," e. g. "good or bad things that happen to you, problems you are having, or important concerns you may have". In the first step, we find significant correlations among early retirement, mental health and social networks, which give first evidence for our line of reasoning (29.2). This explanation is confirmed and strengthened in the second step when we control for other possible determinants (29.3). Chapter 29.4 concludes the presentation.

## 29.2 The triangle of early retirement, mental health and social networks

Figure 29.1 depicts the correlations in the triangle of early retirement, mental health and social networks. Each domain is characterised by a set of variables. Individuals are categorised as retired either when they self-report as "retired" or when they receive an old-age pension. We measure the time elapsed since the earlier of the two events has taken place. This variable is of particular interest since it best describes the "dose" of retirement exposure which may have triggered a "response" in terms of social networks and mental health, using the parlance of epidemiology. For both status and time elapsed, we distinguish three retirement pathways: normal retirement at or after the pensionable age as defined by the OECD (2011) ("NORMret" and "NORMtime"), retirement due to receipt of disability insurance (DI) benefits at an age before this pensionable age ("DIret" and "DItime") and early retirement for all

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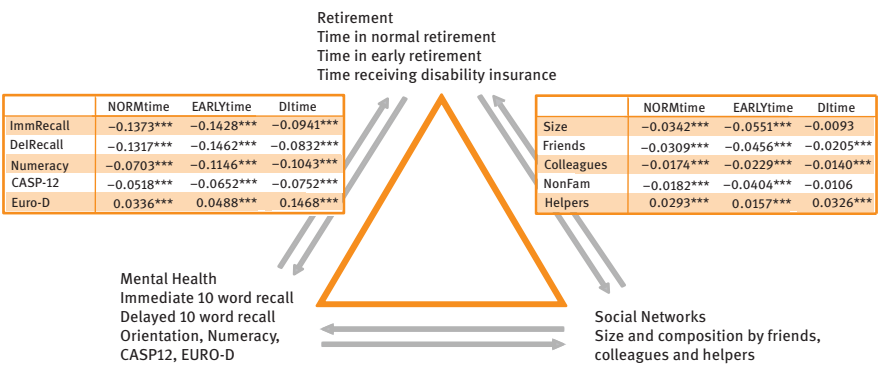
other labour force exits before the pensionable age that are not related to receiving disability benefits ("EARLYret" and "EARLYtime").

Mental health is measured by five variables: the number of words recalled from a list of ten – both immediately ("ImmRecall") and delayed (after about 30 minutes) ("DelRecall") – and a composite indicator of numeracy ("Numeracy"). We add a 12- item composite scale (CASP-12) designed to measure the quality of life in (early) old age, adapted by SHARE from the original 19-item scale (Hyde et al. 2003) and a depression scale targeted at mild or severe depression symptoms – the EURO-D (Prince et al. 1999).

Finally, social networks, the key domain in this paper, are characterised by their size (number of individuals mentioned as close confidants) and their composition, focusing on non-family members including friends and colleagues. More precisely, the variable "Size" counts all members of the social network, "Colleagues" the number of colleagues in the network, "Friends" the number of friends, "FrndsCollgs" their combination, "Helpers" the number of formal helpers and "NonFam" the number of non-family members mentioned in the name generator without including formal helpers.

Figure 29.1 reports the correlations among these variables, based on our working sample which includes all individuals who have retired by Wave 4 and are below age 80. Asterisks mark statistically significant relationships between the variables (at 1%).




| | NORMtime | EARLYtime | DItime |
|---|---|---|---|
| ImmRecall | −0.1373*** | −0.1428*** | −0.0941*** |
| DelRecall | −0.1317*** | −0.1462*** | −0.0832*** |
| Numeracy | −0.0703*** | −0.1146*** | −0.1043*** |
| CASP-12 | −0.0518*** | −0.0652*** | −0.0752*** |
| Euro-D | 0.0336*** | 0.0488*** | 0.1468*** |

| | NORMtime | EARLYtime | DItime |
|---|---|---|---|
| Size | −0.0342*** | −0.0551*** | −0.0093 |
| Friends | −0.0309*** | −0.0456*** | −0.0205*** |
| Colleagues | −0.0174*** | −0.0229*** | −0.0140*** |
| NonFam | −0.0182*** | −0.0404*** | −0.0106 |
| Helpers | 0.0293*** | 0.0157*** | 0.0326*** |

| | Size | Friends | Colleagues | NonFam | Helpers |
|---|---|---|---|---|---|
| ImmRecall | 0.1583*** | 0.1499*** | 0.0538*** | 0.1290*** | −0.0372*** |
| DelRecall | 0.1505*** | 0.1473*** | 0.0478*** | 0.1244*** | −0.0391*** |
| Numeracy | 0.1436*** | 0.1071*** | 0.0333*** | 0.0689*** | −0.0634*** |
| CASP-12 | 0.1197*** | 0.0930*** | 0.0113 | 0.0727*** | −0.0287*** |
| Euro-D | −0.0332*** | −0.0169*** | −0.0040 | 0.0045 | 0.0610*** |

**Figure 29.1:** Correlations in the triangle of early retirement, mental health and social networks (sample size varies across variables)
Significance: ***=1%
Source: SHARE Wave 1 release 2.5.0, Wave 2 release 2.5.0, Wave 3 release 1, Wave 4 release 1

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The correlations in Figure 29.1 show that the time since retirement is significantly related to all mental health variables: it affects cognition and well-being negatively and increases the measure of depressive symptoms. Moreover, the time elapsed after an early retirement has stronger associations with worsening mental health than the time elapsed since normal retirement although individuals retiring early are almost always younger than those retiring at the pensionable age. Time elapsed since retirement is also correlated with smaller social networks, both overall and concerning colleagues, friends and other non-family members. Again, this time effect is stronger for early retirees than normal retirees. Correlations with the number of formal helpers have, as expected, exactly the opposite pattern. Finally, the association between social networks and mental health is highly significant. Larger social networks are strongly associated with better cognitive abilities, higher subjective well-being (CASP-12) and less depression (EURO-D).

## 29.3 Controlling for other determinants

The correlations depicted may have many reasons. An underlying common cause could be physical health. Individuals with worse physical health tend to retire earlier. They may have mobility problems and therefore less ability to maintain their social network. Suffering from bad physical health is likely to reduce well-being and increase depression, and to reduce mental health and cognition either directly (biologically) or indirectly (psychologically).

Demographic variables such as age, gender and marital status also affect all three variables. Retirement rules are age and gender specific in all SHARE countries; age, gender and marital status are significant factors influencing morbidity; and they are associated with the size and closeness of social networks. Also education is likely to modify all the observed associations.

Given all the above, the following regression analyses control for these background variables. Health is characterised by functional abilities (basic activities of daily living, denoted by “adl”, and the global activity limitation indicator developed by van Oyen et al. 2006, denoted by “gali”), the presence of one or more chronic illnesses (“longill”), and the objective measure of grip strength (“maxgrip”) measured in kilogram. We do not correct for subjective health (“How do you rate your health”) as this is highly correlated with well-being once objective health is controlled for.

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**Table 29.1:** The influence of retirement on cognition

| | Immediate Recall | Delayed Recall | Numeracy | CASP-12 | EURO-D |
|---|---|---|---|---|---|
| Early retirement (dummy) | 0.041 | 0.100** | 0.068*** | 0.152* | −0.095** |
| | (−0.032) | (−0.040) | (−0.026) | (−0.082) | (−0.040) |
| Years since early retirement | −0.012*** | −0.019*** | −0.010*** | −0.026*** | 0.013*** |
| | (−0.002) | (−0.003) | (−0.002) | (−0.005) | (−0.003) |
| Disability retirement (dummy) | −0.098** | 0.075 | −0.027 | −0.510*** | 0.437*** |
| | (−0.045) | (−0.057) | (−0.040) | (−0.124) | (−0.062) |
| Years since disability retirement | 0.009*** | −0.018*** | 0.010*** | −0.003 | 0.005 |
| | (−0.003) | (−0.003) | (−0.002) | (−0.008) | (−0.004) |
| Female (dummy) | 0.756*** | 0.866*** | 0.143*** | 0.820*** | 0.178*** |
| | (−0.029) | (−0.035) | (−0.024) | (−0.077) | (−0.038) |
| Age (years) | −0.037*** | −0.040*** | 0.002 | −0.025*** | −0.017*** |
| | (−0.002) | (−0.003) | (−0.002) | (−0.005) | (−0.003) |
| Couple (couple) | 0.110*** | 0.049* | 0.092*** | 0.786*** | −0.227*** |
| | (−0.023) | (−0.028) | (−0.019) | (−0.060) | (−0.031) |
| Years of education | 0.098*** | 0.113*** | 0.059*** | 0.082*** | −0.038*** |
| | (−0.002) | (−0.003) | (−0.002) | (−0.006) | (−0.003) |
| Grip strength | 0.023*** | 0.026*** | 0.019*** | 0.033*** | −0.033*** |
| | (−0.001) | (−0.002) | (−0.001) | (−0.004) | (−0.002) |
| Longterm illness (dummy) | −0.070*** | −0.136*** | −0.107*** | −0.462*** | 0.528*** |
| | (−0.023) | (−0.029) | (−0.019) | (−0.06) | (−0.029) |
| ADL (0–6) | −0.163*** | −0.176*** | −0.100*** | −0.427*** | 0.540*** |
| | (−0.018) | (−0.019) | (−0.013) | (−0.048) | (−0.026) |
| GALI (dummy) | −0.127*** | −0.179*** | −0.038** | 0.097 | 0.600*** |
| | (−0.023) | (−0.029) | (−0.019) | (−0.061) | (−0.030) |
| Constant | 5.649*** | 4.247*** | 2.342*** | 20.300*** | 4.389*** |
| | (−0.174) | (−0.215) | (−0.141) | (−0.456) | (−0.232) |
| Observations | 25,591 | 25,598 | 15,988 | 25,666 | 25,463 |
| Adjusted $R^2$ | 0.16 | 0.14 | 0.13 | 0.05 | 0.20 |

Significance: *** = 1%; ** = 5%; * = 10%, respectively
Notes: Robust standard errors in parentheses
Source: SHARE Wave 1 release 2.5.0, Wave 2 release 2.5.0, Wave 3 release 1, Wave 4 release 1

Table 29.1 reproduces the findings quoted in the introduction to this chapter that retirement affects cognition, even when holding other potential determinants constant. Noteworthy is the difference that emerges between retirement status and the time elapsed since retirement. Cognition is mainly affected by the time

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elapsed, while well–being and depression differs by the type of retirement. For those who receive disability benefits it is this fact which carries the effect, while in early retirement, the effect depends on the time elapsed. While we are aware that such a regression may possibly reflect reverse causality, the literature cited in the introduction contains fairly convincing arguments that this relationship is actually causal. Table 29.2 shows that part of the explanation may be social networks.

**Table 29.2:** The influence of retirement and social networks on cognition

| | Immediate Recall | Delayed Recall | Numeracy | CASP-12 | EURO-D |
|---|---|---|---|---|---|
| Early retirement (dummy) | 0.032 | 0.090** | 0.062** | 0.106 | −0.110*** |
| | (−0.032) | (−0.041) | (−0.027) | (−0.083) | (−0.041) |
| Years since early retirement | −0.011*** | −0.018*** | −0.009*** | −0.022*** | 0.014*** |
| | (−0.002) | (−0.003) | (−0.002) | (−0.005) | (−0.003) |
| Disability retirement (dummy) | −0.0908** | 0.0853 | −0.0364 | −0.531*** | 0.405*** |
| | (−0.046) | (−0.058) | (−0.040) | (−0.125) | (−0.063) |
| Years since disability retirement | −0.009*** | −0.018*** | −0.008*** | −0.001 | 0.006 |
| | (−0.003) | (−0.003) | (−0.002) | (−0.008) | (−0.004) |
| No. of persons in social network | 0.063*** | 0.085*** | 0.044*** | 0.184*** | −0.038*** |
| | (−0.008) | (−0.009) | (−0.006) | (−0.019) | (−0.009) |
| No. of colleagues in social network | 0.065 | 0.048 | −0.052 | −0.072 | 0.090* |
| | (−0.041) | (−0.054) | (−0.033) | (−0.106) | (−0.050) |
| No. of friends in social network | 0.100*** | 0.127*** | 0.039*** | 0.224*** | 0.050*** |
| | (−0.012) | (−0.016) | (−0.011) | (−0.031) | (−0.016) |
| No. of formal helpers in social network | −0.066*** | −0.107*** | −0.124*** | −0.175** | 0.159*** |
| | (−0.025) | (−0.033) | (−0.021) | (−0.068) | (−0.035) |
| Female (dummy) | 0.696*** | 0.793*** | 0.114*** | 0.685*** | 0.199*** |
| | (−0.029) | (−0.036) | (−0.024) | (−0.078) | (−0.039) |
| Age (years) | −0.037*** | −0.040*** | −0.002 | −0.025*** | −0.018*** |
| | (−0.002) | (−0.003) | (−0.002) | (−0.005) | (−0.003) |
| Couple (couple) | 0.123*** | 0.056* | 0.078*** | 0.757*** | −0.174*** |
| | (−0.024) | (−0.030) | (−0.020) | (−0.061) | (−0.032) |
| Years of education | 0.093*** | 0.108*** | 0.057*** | 0.073*** | −0.038*** |
| | (−0.002) | (−0.003) | (−0.002) | (−0.006) | (−0.003) |
| Grip strength | 0.0222*** | 0.0244*** | 0.0185*** | 0.0316*** | −0.0324*** |
| | (−0.001) | (−0.002) | (−0.001) | (−0.004) | (−0.002) |
| Longterm illness (dummy) | −0.080*** | −0.158*** | −0.116*** | −0.489*** | 0.523*** |
| | (−0.023) | (−0.029) | (−0.019) | (−0.06) | (−0.029) |

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| | Immediate Recall | Delayed Recall | Numeracy | CASP-12 | EURO-D |
|---|---|---|---|---|---|
| ADL (0–6) | −0.161*** | −0.178*** | −0.097*** | −0.407*** | 0.535*** |
| | (−0.018) | (−0.02) | (−0.013) | (−0.049) | (−0.027) |
| GALI (dummy) | −0.121*** | −0.171*** | −0.034* | 0.112* | 0.599*** |
| | (−0.024) | (−0.029) | (−0.019) | (−0.061) | (−0.030) |
| Constant | 5.548*** | 4.132*** | 2.280*** | 19.990*** | 4.397*** |
| | (−0.177) | (−0.218) | (−0.143) | (−0.460) | (−0.237) |
| Observations | 24,753 | 24,759 | 15,456 | 24,824 | 24,638 |
| Adjusted $R^2$ | 0.17 | 0.15 | 0.14 | 0.05 | 0.20 |

Significance: *** = 1%; ** = 5%; * = 10%, respectively
Notes: Robust standard errors in parentheses
Source: SHARE Wave 1 release 2.5.0, Wave 2 release 2.5.0, Wave 3 release 1, Wave 4 release 1

Adding the social network variables to the earlier regression increases the fit of the regression and reduces the coefficients of the early retirement variables. The social network variables have significant effects on cognition: network size in general and the number of friends in particular significantly increase cognition, while the number of helpers is associated with lower cognition. The latter effect is most likely one of reverse causation.

Indeed, as Table 29.3 shows, early retirement has a direct effect on the total size of the social network, and also on the number of friends, colleagues and other non-family members in the social network.

**Table 29.3:** The influence of retirement on social networks

| | Number of social network persons | | | | |
|---|---|---|---|---|---|
| | Total | Colleagues | Friends | Friends and colleagues | Total without family members and formal helpers |
| Early retirement (dummy) | 0.103*** | 0.017*** | 0.015 | 0.032 | 0.020 |
| | (−0.033) | (−0.005) | (−0.019) | (−0.019) | (−0.021) |
| Years since early retirement | −0.014*** | −0.001*** | −0.005*** | −0.006*** | −0.006*** |
| | (−0.002) | (0.000) | (−0.001) | (−0.001) | (−0.001) |
| Disability retirement (dummy) | 0.070 | −0.013* | 0.043* | 0.030 | 0.041 |
| | (−0.046) | (−0.007) | (−0.025) | (−0.026) | (−0.029) |

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| | | | | | |
|---|---|---|---|---|---|
| Years since disability retirement | −0.005* (−0.003) | 0.000 (0.000) | −0.005*** (−0.002) | −0.004*** (−0.002) | −0.004** (−0.002) |
| Female (dummy) | 0.482*** (−0.028) | 0.003 (−0.004) | 0.136*** (−0.016) | 0.139*** (−0.016) | 0.135*** (−0.018) |
| Age (years) | 0.002 (−0.002) | −0.001* (0.000) | −0.003*** (−0.001) | −0.004*** (−0.001) | −0.003** (−0.001) |
| Couple (couple) | 0.181*** (−0.023) | −0.020*** (−0.004) | −0.284*** (−0.014) | −0.304*** (−0.014) | −0.429*** (−0.016) |
| Years of education | 0.025*** (−0.002) | 0.004*** (0.000) | 0.022*** (−0.001) | 0.025*** (−0.001) | 0.024*** (−0.002) |
| Grip strength | 0.003** (−0.001) | 0.000 (0.000) | 0.000 (−0.001) | 0.000 (−0.001) | 0.000 (−0.001) |
| Longterm illness (dummy) | 0.129*** (−0.023) | 0.015*** (−0.004) | −0.002 (−0.013) | 0.013 (−0.013) | 0.008 (−0.015) |
| ADL (0–6) | −0.007 (−0.015) | 0.001 (−0.002) | −0.010 (−0.008) | −0.009 (−0.008) | 0.000 (−0.009) |
| GALI (dummy) | −0.054** (−0.023) | −0.006* (−0.004) | −0.056*** (−0.013) | −0.062*** (−0.014) | −0.049*** (−0.015) |
| Constant | 1.574*** (−0.172) | 0.042* (−0.025) | 0.636*** (−0.095) | 0.678*** (−0.098) | 0.852*** (−0.109) |
| Observations | 25,715 | 25,715 | 25,715 | 25,715 | 24,852 |
| Adjusted $R^2$ | 0.03 | 0.01 | 0.04 | 0.05 | 0.06 |

Significance: *** = 1%; ** = 5%; * = 10%, respectively
Notes: Robust standard errors in parentheses
Source: SHARE Wave 1 release 2.5.0, Wave 2 release 2.5.0, Wave 3 release 1, Wave 4 release 1

Of note in Table 29.3 is the weak influence of retirement due to the receipt of disability insurance. Disability actually is a reason for more formal help, increasing rather than decreasing network size. This is shown in Table 29.4 which relates the number of formal helpers and other non-family network members to disability retirement. Note that disability status, health and time since receiving disability benefits are highly collinear.

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**Table 29.4:** The influence of disability retirement on the number of formal helpers in the social network

| | No. of formal helpers and other non-family members[1] in the social network | | | | | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Disability retirement (dummy) | 0.042*** (0.007) | 0.044*** (0.007) | 0.032*** (0.008) | 0.036*** (0.013) | 0.032*** (0.008) | 0.032** (0.013) |
| Years since disability retirement | | | | 0.000 (0.001) | | 0.001 (0.001) |
| + Demographics | no | yes | yes | yes | yes | yes |
| + Health | no | no | yes | yes | yes | yes |
| + Country/time FE | no | no | no | no | yes | yes |
| Observations | 26,977 | 26,574 | 24,852 | 24,852 | 24,681 | 24,681 |
| Adjusted $R^2$ | 0.002 | 0.015 | 0.017 | 0.017 | 0.026 | 0.026 |

Significance: *** = 1%; ** = 5%; * = 10%, respectively
Notes: Robust standard errors in parentheses; [1] Other non-family members without including colleagues, friends and ex-spouses/ partners. Variables controlling for demographics, health, education, time and country included but not shown.
Source: SHARE Wave 1 release 2.5.0, Wave 2 release 2.5.0, Wave 3 release 1, Wave 4 release 1

Finally, we tested the robustness of these results against unobserved effects in specific countries at specific times. First, we found large differences in all three domains across the SHARE countries. The Northern countries are healthier, while the social networks in the Southern countries are larger. We note, furthermore, that retirement rules are very different across countries. These differences may reflect cultural and historical differences common to the three domains and might thus cause the significant correlations in Tables 29.1 through 29.4 without a genuine relationship actually at work. Similarly, calendar time effects may have created spurious correlations, especially since the field work in Wave 4 stretched over almost 1.5 years, a time with violent ups and downs due to the financial, economic and debt crises. Moreover, time effects may also reflect interviewer effects since different interviewers were in the field at different times of the survey. We therefore re-estimated all the above regressions with country and time fixed effects. Even then, the results change only very little.

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## 29.4 Early retirement reduces the size of the social network and the cognitive stimulation through them

Is early retirement bliss? Evidence from earlier studies has placed this assumption in doubt. Early retirement may actually be a mixed blessing because cognition declines. Moreover, the effect of early retirement on subjective well-being seems to be negative and short-lived rather than long lasting and positive. This paper has explored one mechanism that may explain why early retirement contains negative effects: the erosion of social networks after retirement. Social isolation, in turn, diminishes the day-to-day challenges that keep people mentally fit and well because, ultimately, human beings are social entities. We find evidence that retirement in general, and early retirement in particular, reduces the size of the social network, and in particular the number of friends and other non-family contacts in the interpersonal milieu (and not only the number of immediate colleagues).

While it appears far-fetched that the size of the social network precipitates the decision to retire early, we have only limited possibilities to econometrically establish that the negative influence of early retirement on the size of social networks is indeed causal. SHARE provides some helpful exogenous variation through cross-national differences in pension policies. The pensionable age provided by the OECD (2011), however, has very little variation in order to serve as an instrument for the decision to retire early. SHARE also contains some indicators of social isolation in earlier waves, but since the sample size of the prototypical earlier waves was much smaller and we require transitions into retirement for identification, this strategy fails due to too few observations. A desirable future research strategy, therefore, is to observe social networks over time. SHARE will include the extensive social network measures again in Wave 6.

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## References

Adam, Stéphane, Bonsang, Eric, Germain, Sophie, Perelman, Sergio (2007): "Retirement and cognitive reserve: a stochastic frontier approach applied to survey data". In: *CREPP working papers* 2007/04, HEC-ULg.

Bonsang, Eric, Adam, Stéphane, Perelman, Sergio (2010): "Does retirement affect cognitive functioning?". In: *ROA Reserach Memorandum* 2010/1, Maastricht University.

Börsch-Supan, Axel, Jürges, Hendrik (2009): "Early retirement, social security and well-being in Germany". In: Wise, David (Ed.): *Developments in the economics of aging*. University of Chicago Press, p. 173–199.

Börsch-Supan, Axel (2012): "Entitlement reforms in Europe: policy mixes in the current pension reform process". In: Alesina, Alberto, Giavazzi, Francesco (Eds.): *Fiscal Policy after the Financial Crisis,* University of Chicago Press.

Bound, John (1991): "Self-Reported versus objective measures of health in retirement models". In: *Journal of Human Resources* 26, p. 106–138.

Charles, Kerwin Kofi (2002): "Is retirement depressing? Labour force inactivity and psychological well-being in later life". In: *NBER Working Paper* 9033.

Clark, Andrew, Diener, Ed, Georgellis, Yannis, Lucas, Richard (2003): "Lags and leads in life satisfaction. A test of the baseline hypothesis". In: *DIW Discussion Paper* 37.

Coe, Norma, von Gaudecker, Hans-Martin, Lindeboom, Maarten, Maurer, Jürgen (2012): "The effect of retirement on cognitive functioning". In: *Health Economics* 21(8), p. 913–927.

Gruber, Jonathan, Wise, David (Eds.) (1999): *Social security and retirement around the world*. Chicago.

Hyde, Martin, Wiggins, Richard, Higgs, Paul, Blane, David (2003): "A measure of quality of life in early old age: the theory, development and properties of a needs satisfaction model (CASP-19)". In: *Aging Mental Health* 7, p. 186–194.

Lindeboom, Maarten, Portrait, France, van den Berg, Gerard (2002): "An econometric analysis of the mental-health effects of major events in the life of elderly individuals". In: *Health Economics* 11, p. 505–520.

Mazzonna, Fabrizio, Peracchi, Franco (2012): "*Aging, cognitive abilities and retirement*". In: *European Economic Review* 56(4), p. 691–710.

OECD (2011): "*Pensions at a glance 2011: Retirement-income systems in OECD and G20 countries".* OECD Publishing. Paris.

Prince, Martin, Reischies, Friedel, Beekman, Aartjan, Fuhrer, Rebecca, Jonker, Cara, Kivela, Sirkka-Liisa, Lawlor, Brian, Lobo, Anthony, Magnusson, Halgrimur, Fichter, Manfred, van Oyen, Herman, Roelands, Marc, Skoog, Ingmar, Turrina, Cesare, Copeland, John (1999): "Development of the EURO-D scale-A European Union initiative to compare symptoms of depression in 14 European centres". In: *The British Journal of Psychiatry* 174, p. 330–338.

Rohwedder, Susann, Willis, Robert (2010): "Mental retirement". In: *Journal of Economic Perspectives* 24(1), p. 119–138.

Van Oyen, Herman, van der Heyden, Johan, Perenboom, Rom, Jagger, Carol (2006): "Monitoring population disability: evaluation of a new Global Activity Limitation Indicator (GALI)". In: *Sozial-und Präventivmedizin* 51(3), p. 153–61.

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