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Family and intergenerational influences on health and well-being in Europe

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Family and intergenerational influences on health and well-being in Europe

- Family identified as one of the most important domains of life
- Better physical and mental health and lower mortality among married people; Marital and fertility histories associated with health and mortality (selection v causal effects)
- Reported associations between living alone/few social contacts and risk of cognitive decline in later life.
- Older people who see friends and family 3+ times a week half as likely as others to develop depression; for those 70+, contact with family most important *(Teo et al, JAGs, 2015)*
- Unpartnered/childless older people use more publicly provided services

- Family also a potential source of stress:
  - Meeting needs of children, especially if larger family size; young parent or strained financial circumstances
  - Partnership breakdown and family conflict
  - Caregiving for older disabled parents
- Accumulated stresses may have long-lasting effects (Pearlin 1999)

Life course events in one generation may affect the well-being of other generations: 'linked lives' (Elder 1994);
Contextual influences – state supports, cultural norms, economic situation etc.- may modify/mediate associations

Intergenerational support in Europe:

From children to older parents associated with:

- Low education +
- Female gender +
- Few siblings +
- Parental disability +
- Mother a widow +
- Father divorced –
- Living in Southern rather than Northern Europe +
- Reciprocity +

From older parents to adult children associated with:

- Higher income +
- Home owner +
- Low disability +
- Being a divorced man –
- Children's age and proximity
- Reciprocity +
- Living in Southern rather than Northern Europe +

Less variation between social groups in Southern than in Northern Europe

Less known about East-West differences

Problems of identification and interpretation

- Family lineages share many attributes (genetic, environmental) which may determine, moderate, mediate or confound associations between family exchanges and health
- Reverse causation, e.g. receipt of social support may be driven by health needs
- Complex pathways and changing contextual influences.
- Selective influences may operate in different directions according to age and other characteristics
- Cannot randomise family related behaviours and hard to find e.g. instrumental variables

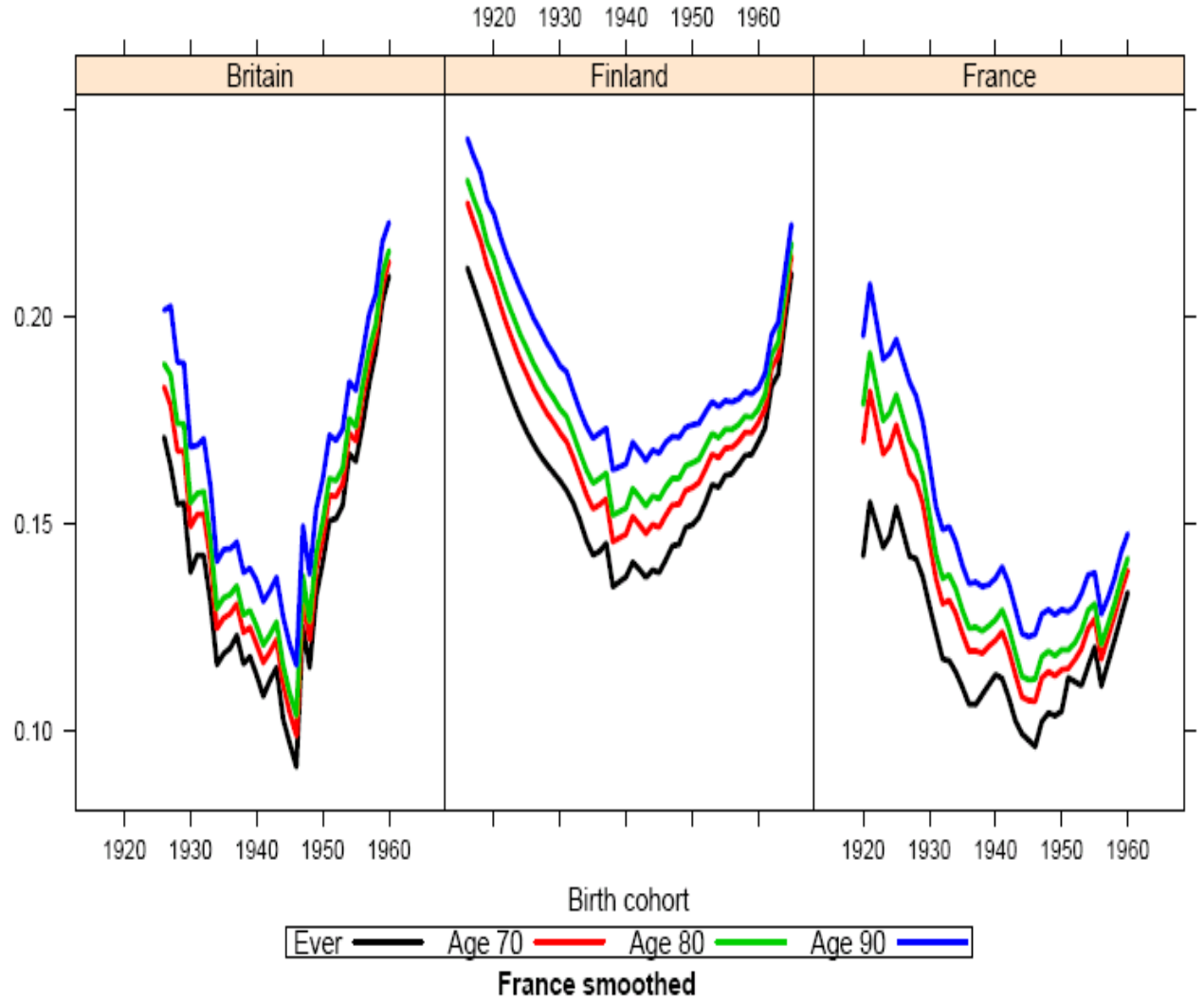
Outline:

- Demographic and policy context
- Fertility histories and later life health: variations in associations within Europe
- Availability of children and depression among older adults E v W Europe
- Co-residence and older adults' wellbeing: European variations
- Returns home and young adults' mental health
- Linked lives: effects of parental death on prescription drug use
- Discussion

Availability of close family for older people in Europe:

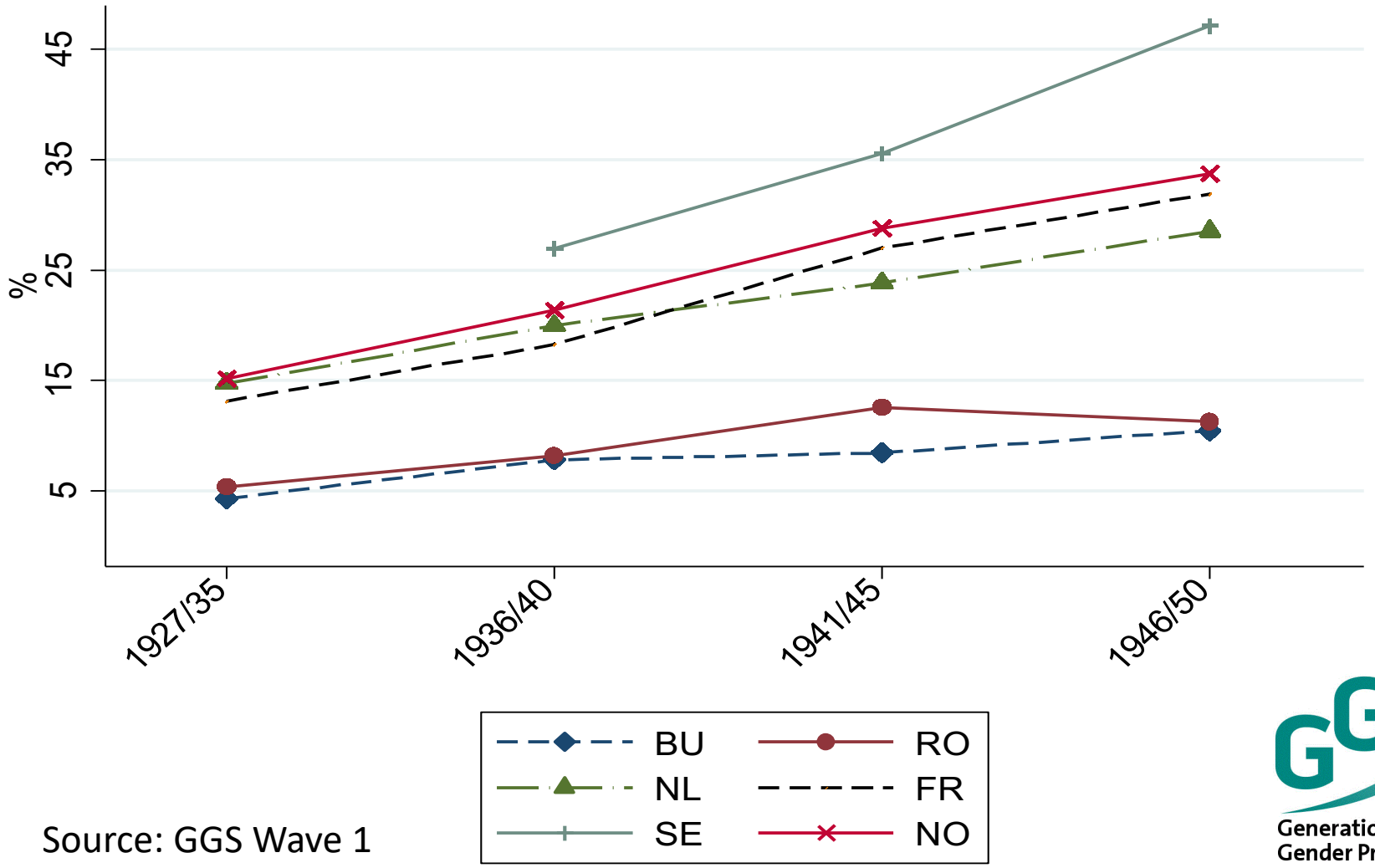
- Reduced mortality especially among men has increased the proportion of older people who are married and reduced the proportion of women who are widowed – but large regional differences
- Trends are affected by marital and parenthood histories; those born in the 1940s had the highest rates of marriage ever experienced, more early parenthood and less childlessness than earlier or later cohorts
- This trend is now starting to reverse as those born in the 1950s enter older age bands
- 'Second demographic transition' type changes among those born mid 1950s onwards (increased individualism, growth of divorce and non standard partnership trajectories) may impact on family support

Proportion of women at selected ages with no living child



Source: Murphy et al Eur J Pop 2006

% ever-divorced by age 55 by birth cohort; persons aged 55-80

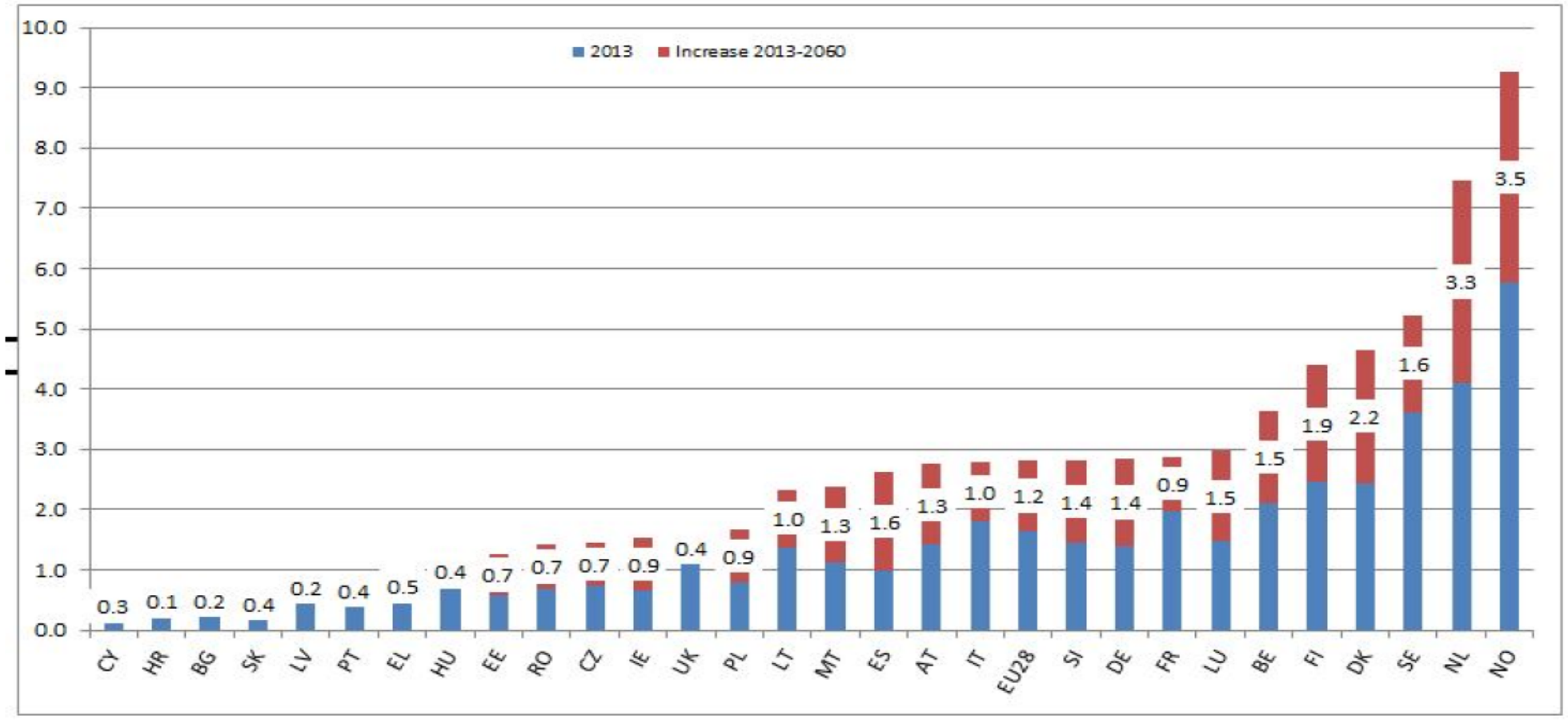


Source: GGS Wave 1

Generations and Gender Programme

Current and projected public spending (% of GDP) on Long Term Care, Europe 2013-2060

Graph II.3.9: **Demographic scenario, current and projected levels of public expenditure on LTC as % of GDP; 2013-2060**



Source: European Commission, 2015 Ageing Report

How and why may fertility histories be linked with later life health?

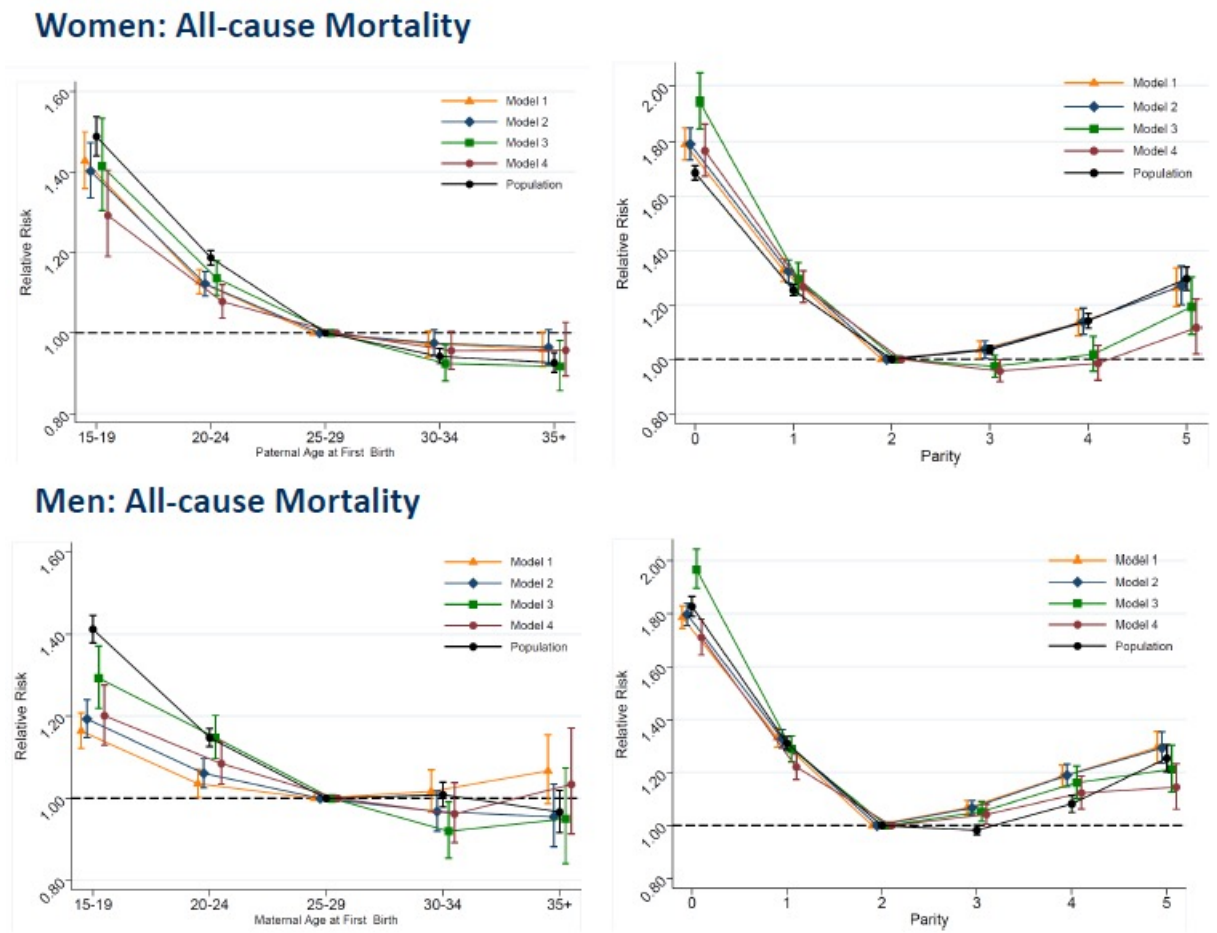
Selection

- Poor health/health behaviours may restrict opportunities for marriage and reduce fertility (obesity, excessive alcohol use and smoking all associated with lower fecundity of both women and men).
- Antecedent disadvantage is associated both with early parenthood and with later poorer health (life course theory: Belsky; 'Weathering' hypothesis, Geronimus)
- Late fecundity and fertility may be marker of slower ageing/better health

Causal

- **Direct effects** e.g. physiological consequences of pregnancy and childbirth (for women); effects of social interaction
- **Indirect effects** e.g. costs/benefits of child rearing, including social support from children (and grandchildren) in later life; influences on life course trajectories, e.g. early childbearing may increase risks of high parity/divorce.

Fertility and all cause mortality: Results from sibling comparison (and other) models; deaths at ages 45-80 birth cohorts 1932-60, whole Swedish population

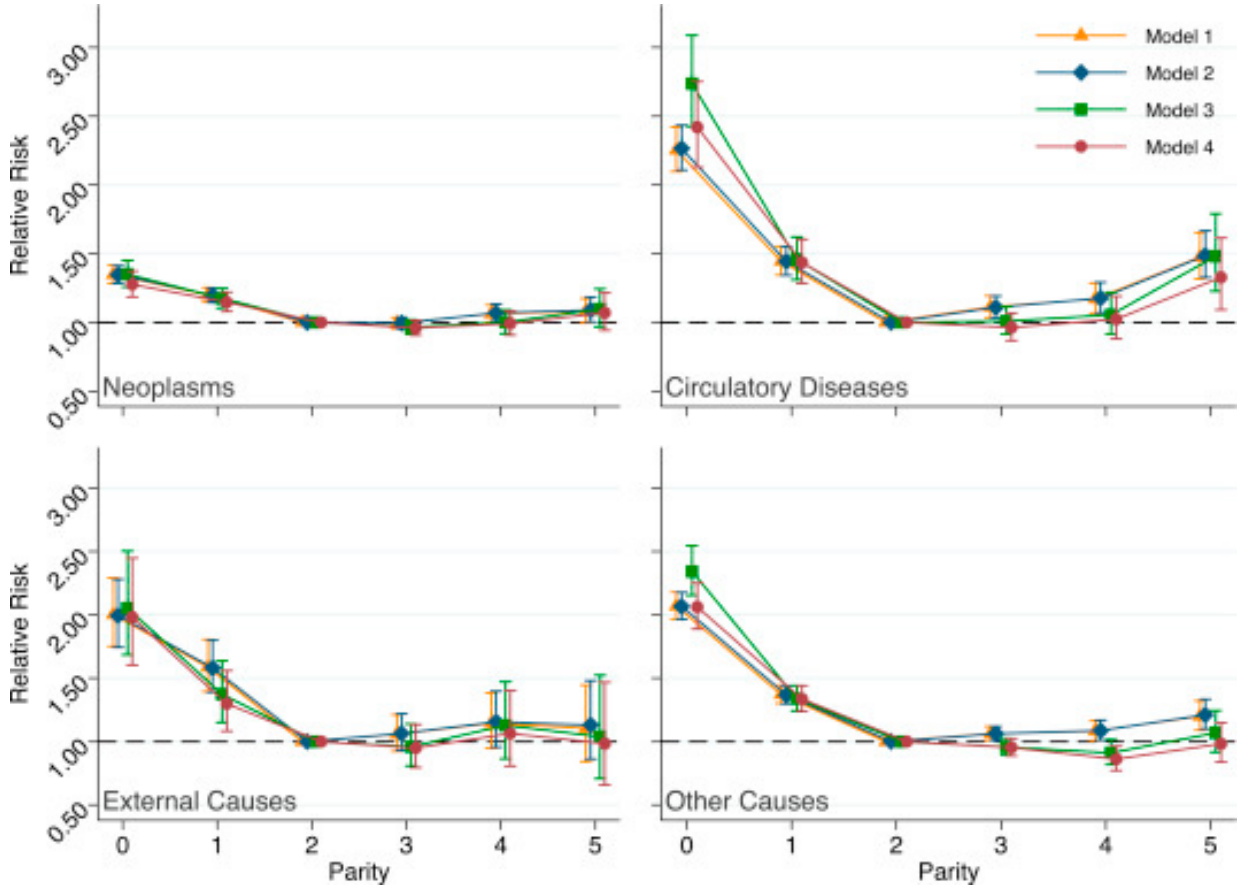


- Model 1: Regular Cox model, adjusting for birth year
- Model 2: Regular Cox model, adjusting for birth year and observed parental SES.
- Model 3: Stratified Cox model, adjusting for birth year, age of index person's mother at time of index person's birth.
- Model 4: Stratified Cox model, adjusting for birth year, age of index person's mother, attained SES, educational attainment, and time-varying marital status.

Barclay, K., Keenan, K., Grundy, E., Kolk, M., & Myrskylä, M. (2016). *Social Science & Medicine, **155**, 82-92.*

Fertility history and cause-specific mortality: sibling fixed effects models using Swedish registry data

Results for women, parity and cause-specific mortality



M1: Between family, adjusted for cohort
M2: + Parent's occupation
M3: Sibling FE+cohort, mother's age at birth
M4: M3 + own education, SES, time-varying marital status

Barclay, K, Keenan, K, Grundy, E, and Kolk, M, and Myrskylä, M (2016) Reproductive history and post-reproductive mortality: a sibling comparison analysis using Swedish register data. *Social Science & Medicine*, 155. 82-92. ISSN 0277-9536

Fertility history and change in cognitive function

Data

- English Longitudinal Study of Ageing (ELSA) waves 1 - 5 (2002-2010) - nationally representative survey of men and women aged 50+ (*mean age* = 63, *SD* = 9.2 in wave 1)
- Socio-demographic information and self-reported health collected in all waves

Measures

Parenthood history:

Number of natural children (0, 1, 2, 3, 4+); for parents: young (<20/23) age first birth; late age last birth (>34/39).

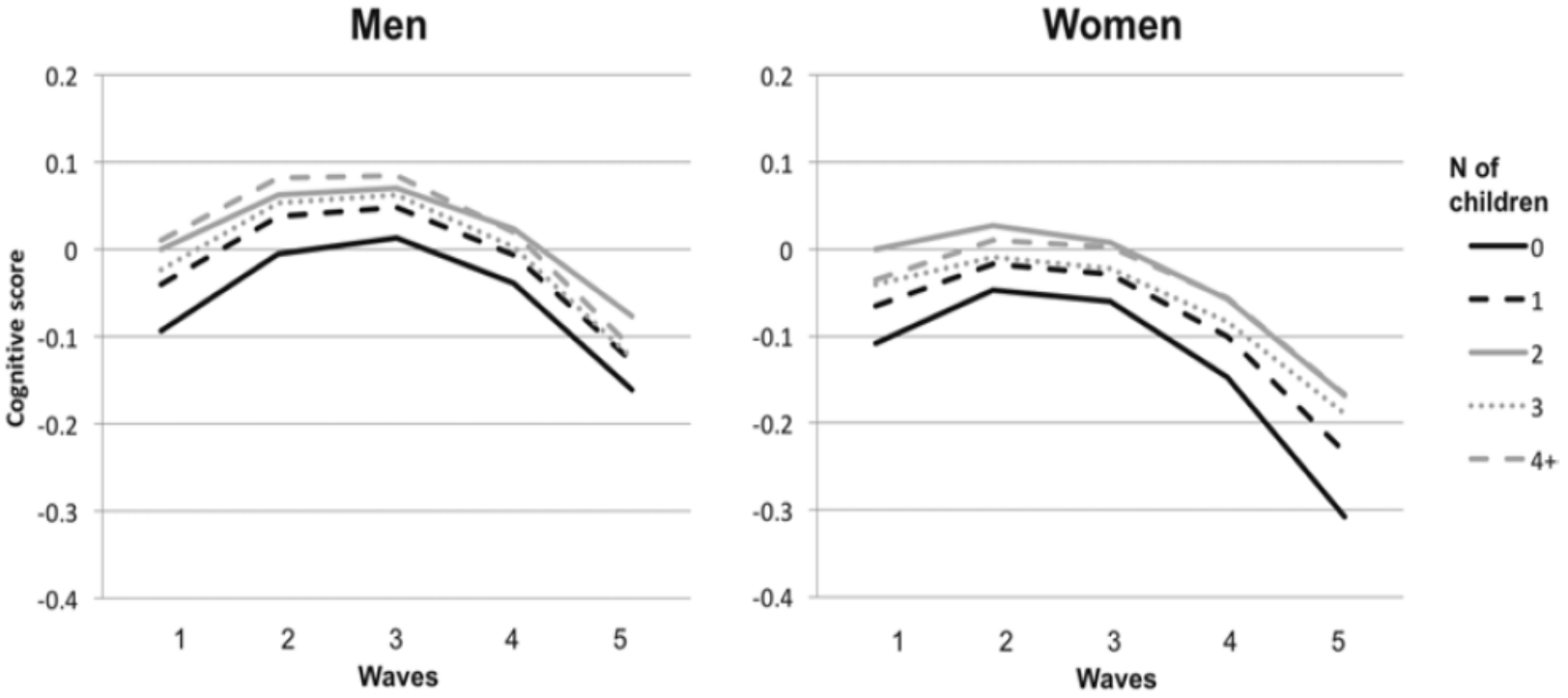
Cognitive functioning:

Mean of standardized scores for immediate word list recall, delayed word list recall and verbal fluency (waves 1-5).

Demographic & life course covariates from wave 1 added in steps:

1. Age
2. + Education; wealth
3. + Limiting long-term illness; physical activity; smoking; depressive symptoms
4. + Sense of control
5. + Social support; married/not married **OR** Social isolation

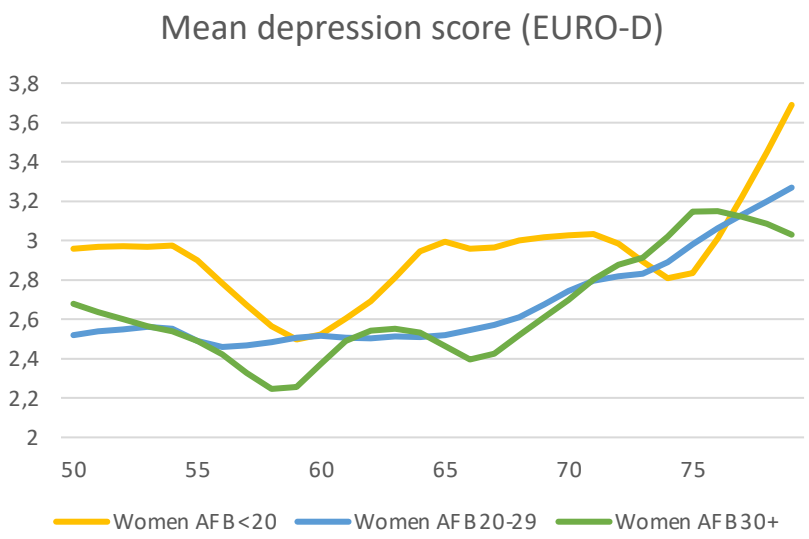
Change (growth curve models) in cognitive functioning by parity, people aged 50 + at baseline, England (ELSA), 2002-2010

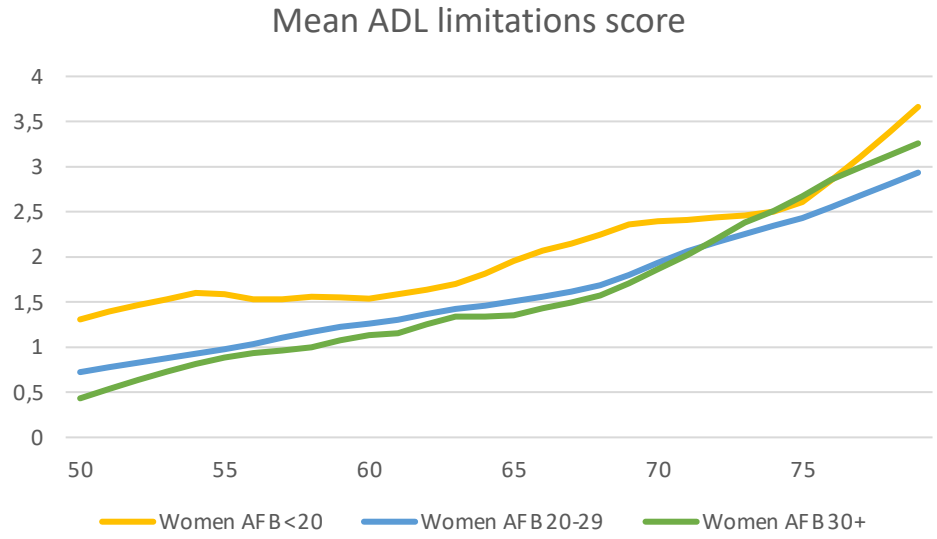


Models adjusted for age, partnership, SES, smoking, physical activity, sense of control and social contacts. *Read & Grundy J Gerontol Soc Sci 2016*

Fertility history and health conditions among women aged 50-79 in Europe (SHARE data)

- At baseline, earlier parenthood associated with higher prevalence of a range of physical and mental health problems (both observed and self-reported) among European women aged 50-79 years. (adjusted marital status, health behaviours, parental occupation, age, country FE)

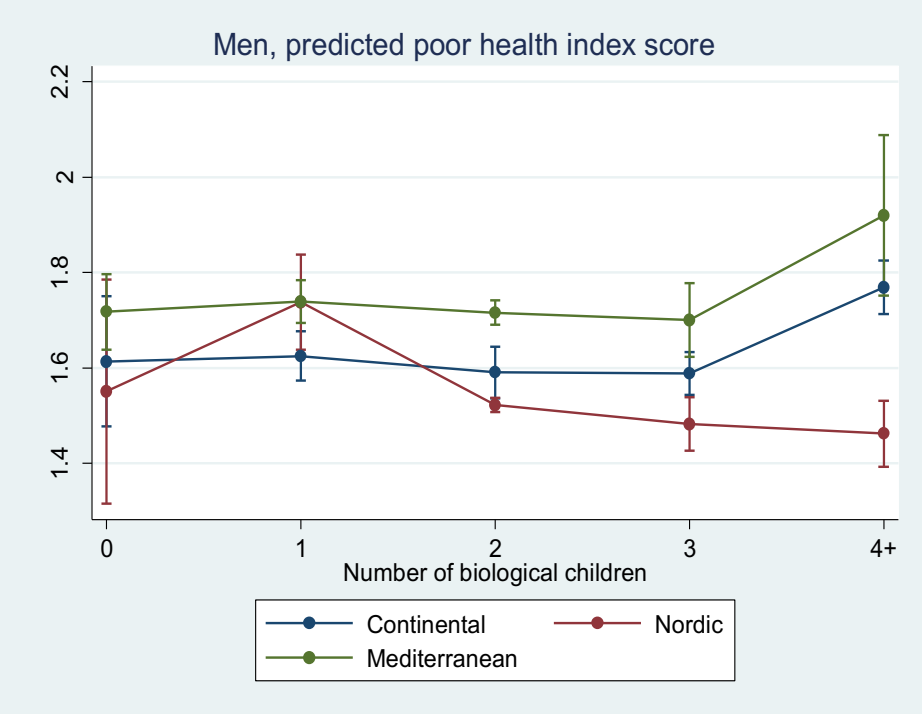


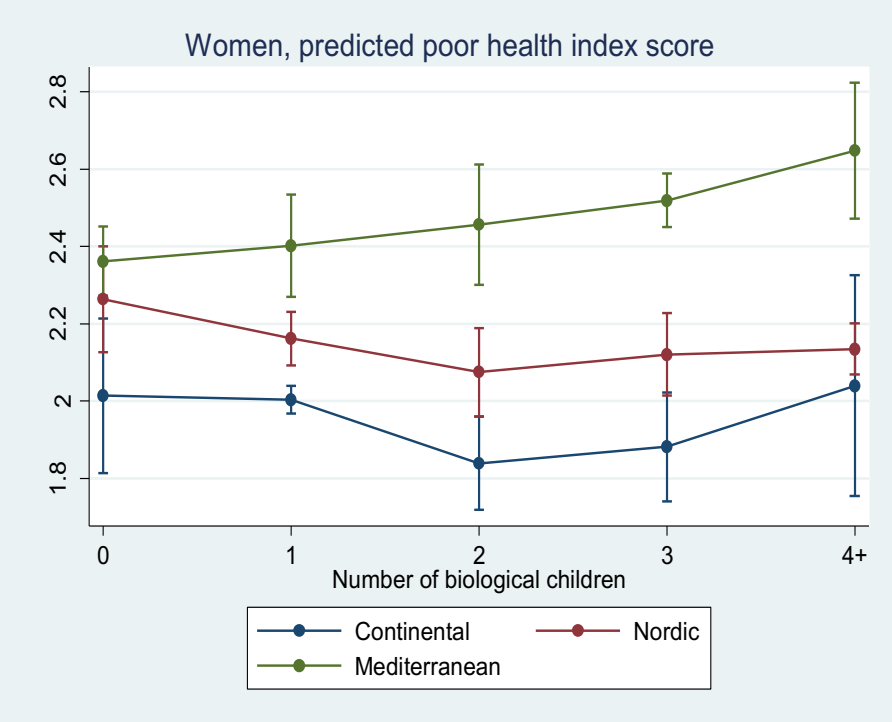


Keenan, K, Grundy, E. (2019). Fertility history and physical and mental health changes in European older adults. *European Journal of Population. 35:459-85*

Parity and health: welfare regime differences

Index of poor health (0-7) : bottom (within-gender) quintile of grip strength, bottom quintile of cognition, having 6+ depressive symptoms, at least one functional limitation and any of the chronic diseases, by parity, SHARE wave 1





Predicted scores from models adjusted for age, age at first birth, country fixed effects, father's occupation, education, marital status, parity (parent's models), smoking behaviour, physical activity, household wealth.

Keenan, K, Grundy, E. (2019). Fertility history and physical and mental health changes in European older adults. *European Journal of Population. 35:459-85.*

Depression among older people: are children protective? East v West

- Availability of children may be especially important in Eastern Europe because:
  - Much higher rates of widowhood
  - Past lower rates of childlessness, but also more one child families-high rates of migration among young – may lead to lack of available child and feelings of regret about past family building
  - Mismatch between expectations and actualities: previously relatively generous pensions and health care access eroded
  - Much higher rates of material hardship so greater need for support
  - Stress arising from social upheaval; resurgent familialism
- Are children therefore more important for mental health in Eastern than in Western Europe?

Generations and Gender Survey (GGS)

- Panel study of adults aged 18-79 (waves 1-2 available for)
- Wave 1 conducted in 17 European countries –mostly 2002-2006, but some later (Sweden 2013)
- Wave 2 data collected 3 years later (but not yet available all countries)
- Individual country data harmonised
- Core questionnaire covers fertility, partnerships, economic activity, and health including retrospective questions on childhood circumstances and events over the life course.

Sample for study:

Wave 1 : **West**: Belgium, France, Norway, Sweden.

East: Bulgaria, Czech Republic, Georgia, Romania, Russia.

Wave 2: **West**: France, **East**: Bulgaria , Czech Republic, Georgia.

Measures

Generations and Gender Programme

- Depressive symptoms: GGS: Short version of CES-D – 7 items from depressed affect subscale each scored 0-3, total score 0-21
- Partnership: current spouse/co-resident partner;
- Number of living children: 0, 1, 2, 3, 4+
- Emotional support ("have you talked to anyone/anyone talked to you about their personal experiences and feelings?")
- Financial support (given/received "for one time, occasionally, or regular money, assets or good of substantive value")

Sample for study:

Wave 1: **West**: Belgium, France, Norway, Sweden.

East: Bulgaria, Czech Republic, Georgia, Romania, Russia.

Data and Methods:

- Used GGS cross-sectional data for 5 Eastern and 4 Western European countries and longitudinal data from 3 Eastern and 1 Western
- Analysed variation in depressive symptom scores (shortened version CES-D) by partnership and number of children (0,1,2,3,4+) using country fixed effects and robust standard errors; conditional change models in longitudinal analysis for subset of countries
- Formally tested whether associations between number of children (and partnership) and depressive symptoms were mediated by receipt and provision of emotional and material support using KHB decomposition method
- Fitted interaction terms in pooled models to test formally for East-West differences in coefficients
- Various sensitivity analyses including multiple imputation to check for bias arising from missing data

Other co-variates:

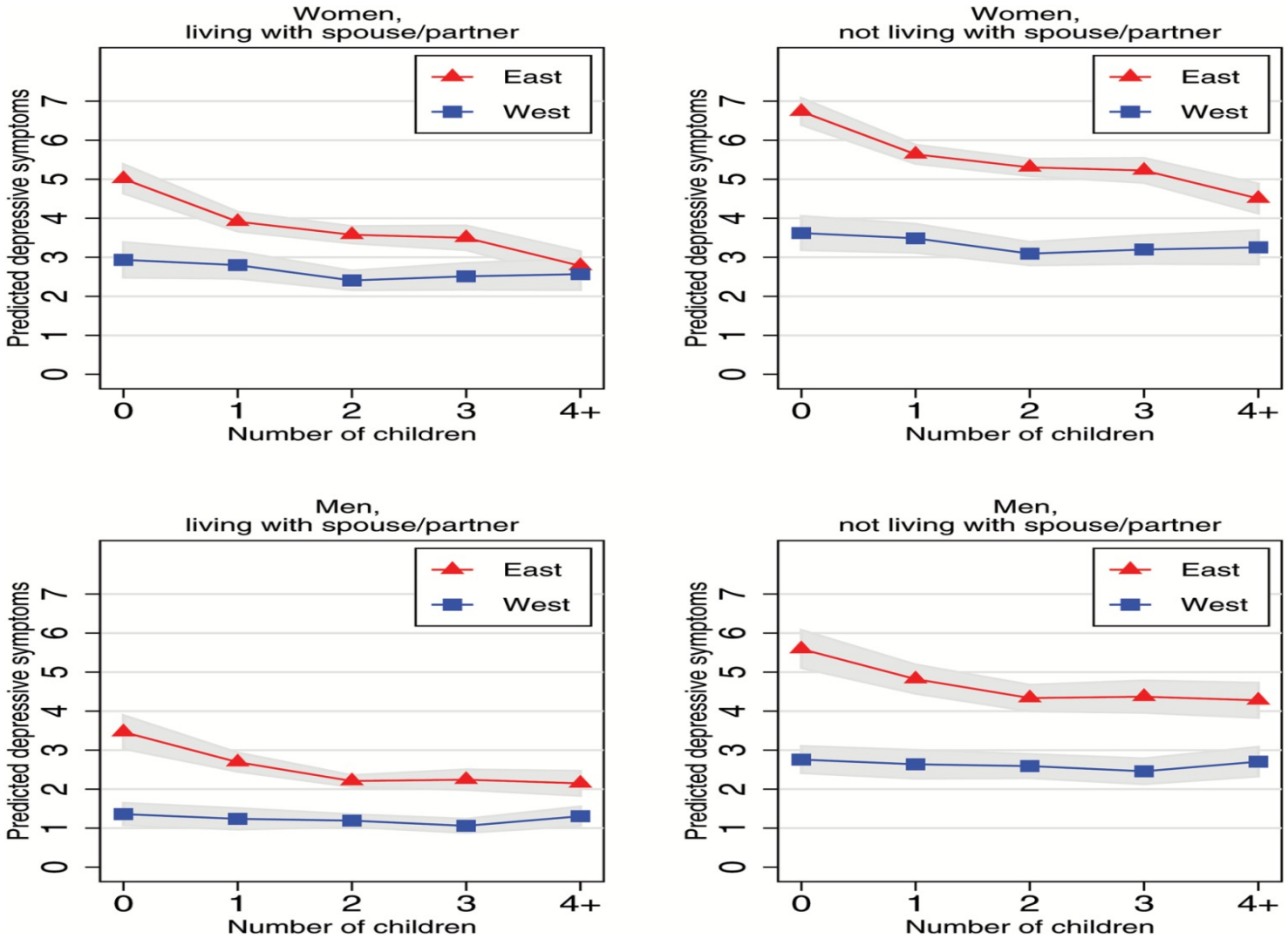
- Age (single years, continuous)
- Whether lived with both parents in childhood: (most of time up to age 14) (yes/no)
- Educational level (Low, medium, high)
- Had child that died (yes/no)
- Self reported long-standing illness or chronic condition (yes/no)
- Self reported need for help with personal care (yes/no)
- Self reported financial strain (difficulty making ends meet) (yes/no)

- In longitudinal models also *onset* of long-standing illness; need for personal care; financial strain since wave 1; loss of partner since wave 1.

Results (cross-sectional):

- Level of depressive symptoms higher in East than West (as shown in earlier studies)
- Unpartnered had more depressive symptoms than the partnered (stronger effect in East than West); financial strain and worse physical health positively associated with depression; more education protective.
- In Eastern but not Western countries childlessness and having only one child rather than two or more was associated with more depressive symptoms
- Formal tests showed associations between partnership and number of children with depressive symptoms were stronger in East than West
- Associations between poorer physical health and depression also stronger in the East

Predicted mean depressive symptoms at baseline by partnership status and number of children: East v West



From: Grundy et al 2019 Number of Children, Partnership Status, and Later-life Depression in Eastern and Western Europe
J Gerontol B Psychol Sci Soc Sci.. doi:10.1093/geronb/gbx050

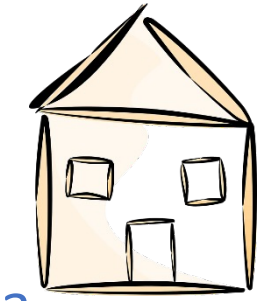
Parent-child contact & relationship quality

Tosi M, Grundy E (2018). Intergenerational contacts and depressive symptoms among older parents in Eastern Europe. *Aging & Mental Health*DOI:10.1080/13607863.2018.1442412.

- The results show that in Bulgaria, Georgia and Russia depressive symptoms increased less for older mothers who met at least one child once a week or more. Increases in mothers' depressive symptoms were associated with infrequent contacts net of relationship quality.

- Intergenerational contacts between older parents and adult children were associated with increases in depressive symptoms to a greater extent for unpartnered than for partnered fathers.

Co-residence in later life



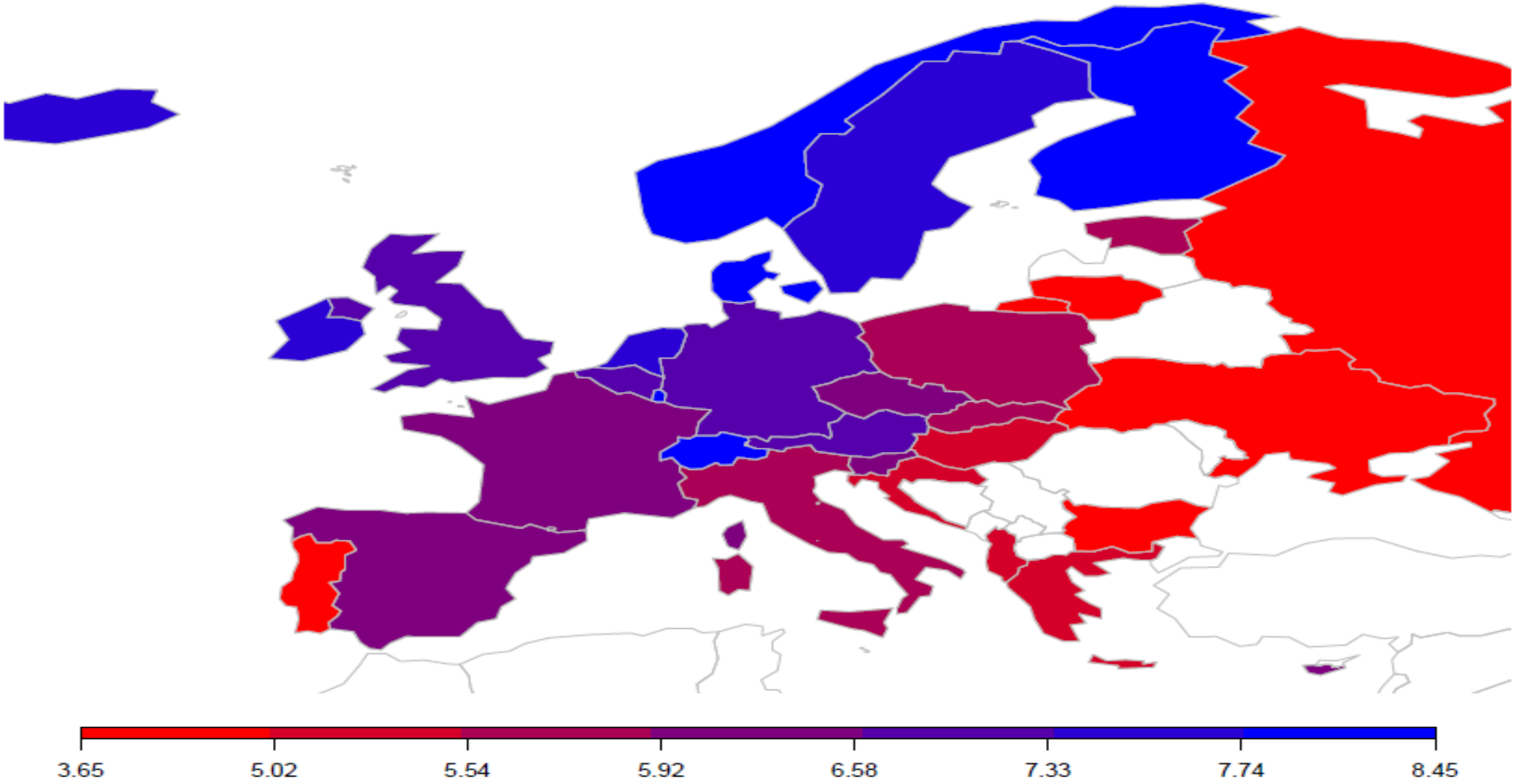
Grundy, E. & Murphy, M. (2017). Co-residence with a child and happiness among older widows in Europe: Does gender of the child matter? *Population, Space and Place 24.3.*

Co-residence may have either positive or negative effects on later-life well-being.

- Potential disadvantages are reduced autonomy and associated possible reductions in self-esteem, stress attendant on any intra-household conflict.

- Potential benefits of co-residence include availability of intra-household companionship, emotional and practical support, and economic benefits from economies of scale.

Average Life Satisfaction Score (unpartnered widowed aged 65+)



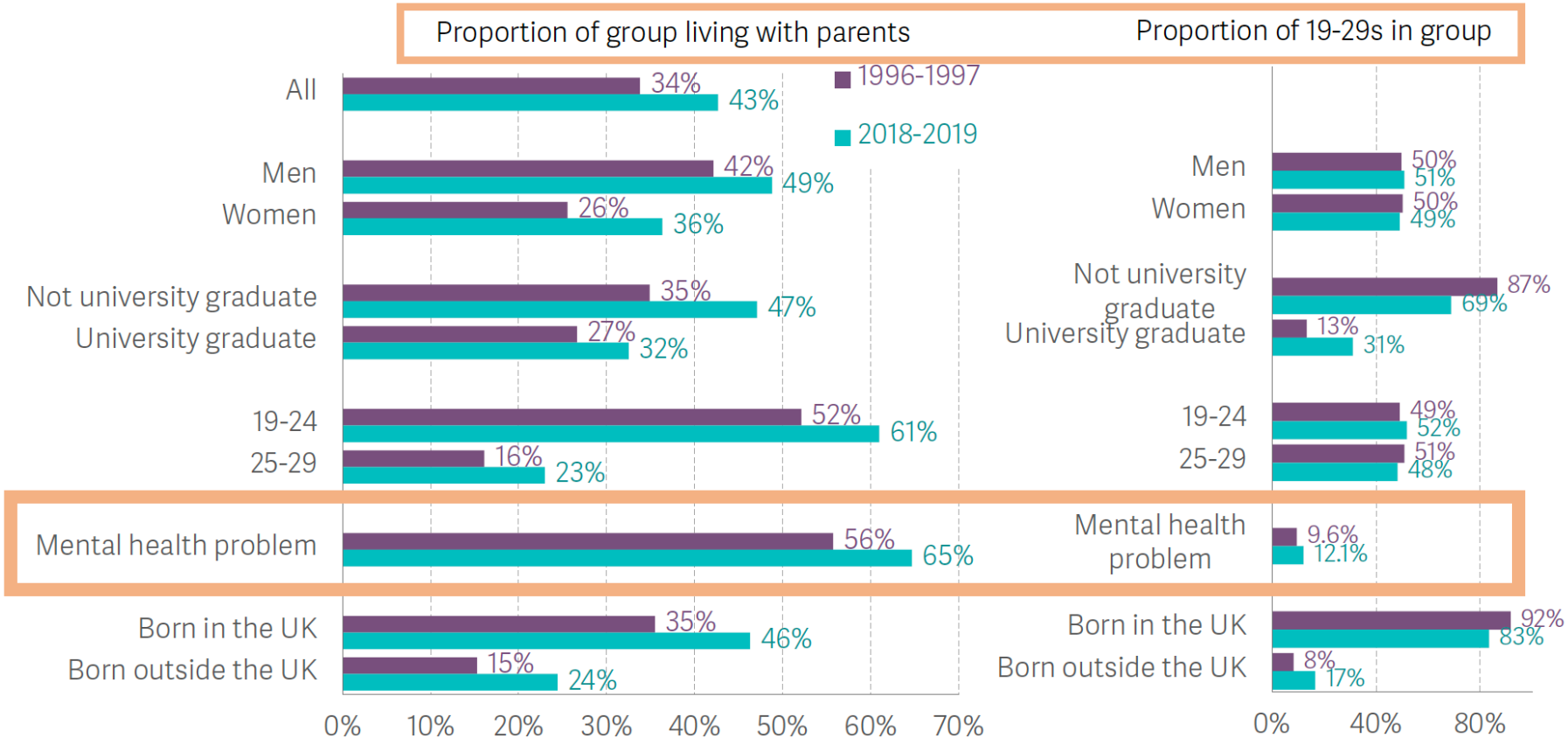
Source: European Values Survey, Waves 1-6

Implications of Co-residence in later life

- Results show that widows living with a child were happier than those living without a child.
- But in Eastern and Southern Europe it was only living with a daughter that had this positive effect.

Source: Analysis of ESS Grundy & Murphy

Living with parents and UK young adults' mental health



NOTES: Mental health figures refer to 1997-1998 rather than 1996-1997.
SOURCE: RF analysis of ONS, Labour Force Survey.

Gustafsson, M. (2021). Boom (erang) Time? An analysis of younger adults living with their parents. Resolution Foundation. https://www.resolutionfoundation.org/app/uploads/2021/06/Boomerang-Time.pdf

Boomerang moves: drivers and mental health implications

- Mental health and other factors (changes in employment, partnership breakdown, etc.) prompt young adults' returns to the parental home in Western populations (Sandberg-Thoma et al., 2015; South & Lei, 2015; Stone et al., 2013; van den Berg et al., 2019)
- Associated with parents' reduced mental health in some EU nations (Tosi & Emily, 2018).

Research gaps

1. Scant literature, using US/Germany data, on the effects of boomerang moves on young adults' mental well-being (Caputo, 2020; Copp et al., 2015; Nauck & Ren, 2021; Preetz et al., 2021).
2. Boomerang movers not always clearly identified.
3. Findings (often adverse) may be prone to selection bias.

Data and sample

UK Household Longitudinal Study

- Successor of BHPS
- Baseline fielded in 2009
- 11 waves (2009-2020)

Study sample (N = 9,714)

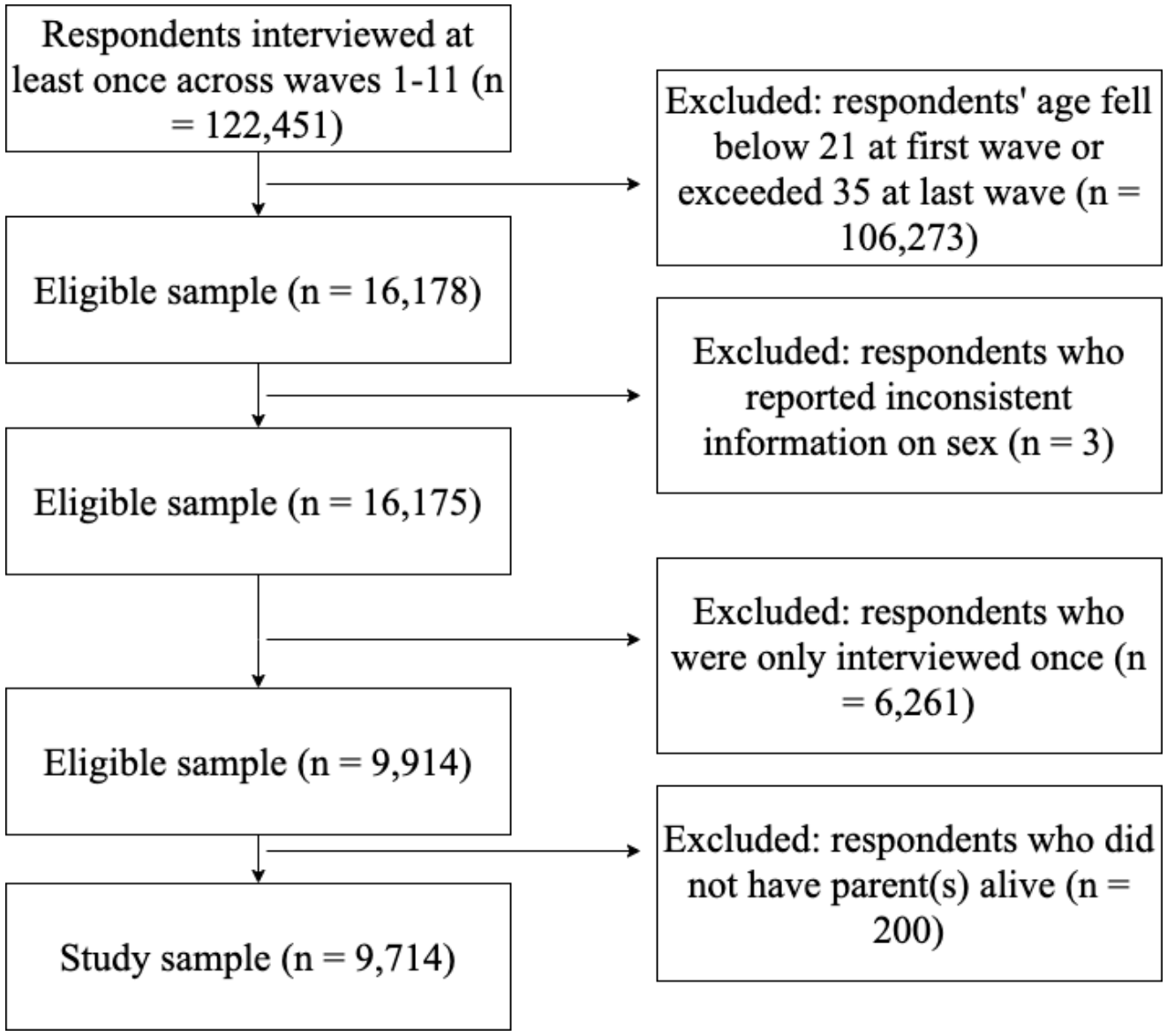


Figure 1. Flow chart of sample selection

Measures for key research question

Dependent variables

General Health Questionnaire (GHQ) score, GHQ caseness,
Mental Component Summary (MCS) score, MCS cut-off points (MCS score ≤ 45.6)

Independent variables

Returnee status (yes or no) for a specific wave

Control variables

Socio-demographics: age, age^2, gender, educational attainment, personal income, longstanding illness, born outside the UK, employment/partnership status;
Household circumstances: tenure, lived with sibling(s), lived with biological child(ren), household income, bedroom standard, household composition;
*Contextual fact*or: lived in rural area

Methods

Models

- RQ1 (determinants of returns) : Logistic regression models
- RQ2 (effects of returns on change in young adults' mental well-being): Linear probability models with fixed effects (LpmFE) (Beck, 2020)

Weights

- cross-sectional weights applied for descriptive statistics
- longitudinal weights not applied (respondents non-consecutively interviewed)

Sensitivity analyses

- Selected those interviewed consecutively and re-analysis for RQ1 and RQ2
- Alternatively estimated LogitFE for binary indicators for RQ2
- Used multiple imputation and estimated LpmFE and LogitFE for RQ2

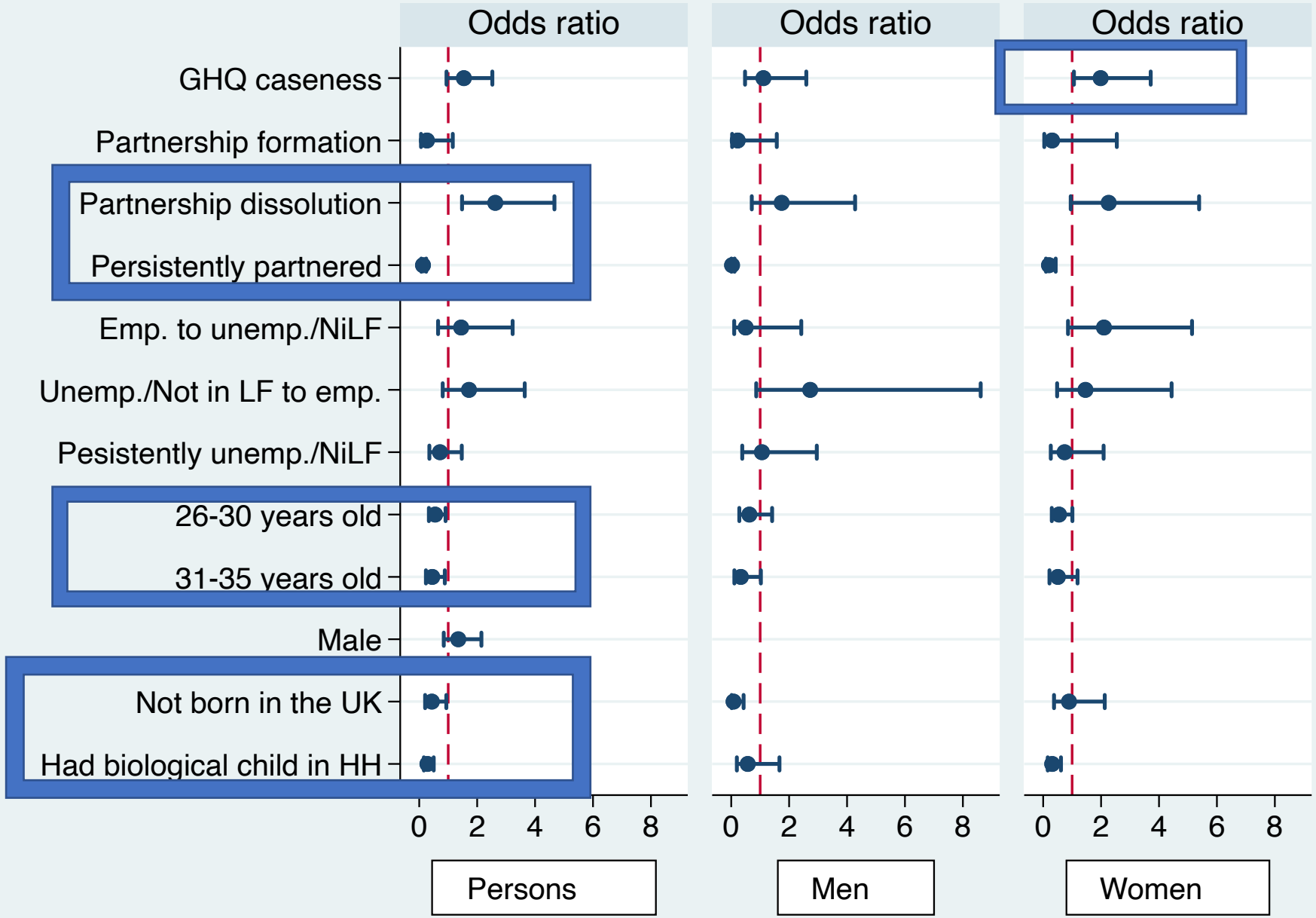
Young Adults' Patterns of Co-residence with Parent(s) during the Entire Follow-up Period (N = 9,714)

	Persons		Men		Women	
	Freq.	%	Freq.	%	Freq.	%
Always lived with parent(s)	207	2.13	140	3.08	67	1.29
Never co-resided with parent(s)	6,352	65.39	2,688	59.22	3,664	70.80
Left parent(s) and never returned	1,671	17.20	902	19.87	769	14.86
Left parent(s) and returned	122	1.26	83	1.83	39	0.75
Joined parent(s) and stayed	197	2.03	116	2.56	81	1.57
Joined parent(s) and left again	600	6.18	285	6.28	315	6.09
Moved out/in more than once	565	5.82	325	7.16	240	4.64
Total	9,714	100.00	4,539	100.00	5,175	100.0

About 15% of young adults made one or more moves back to the parental home.

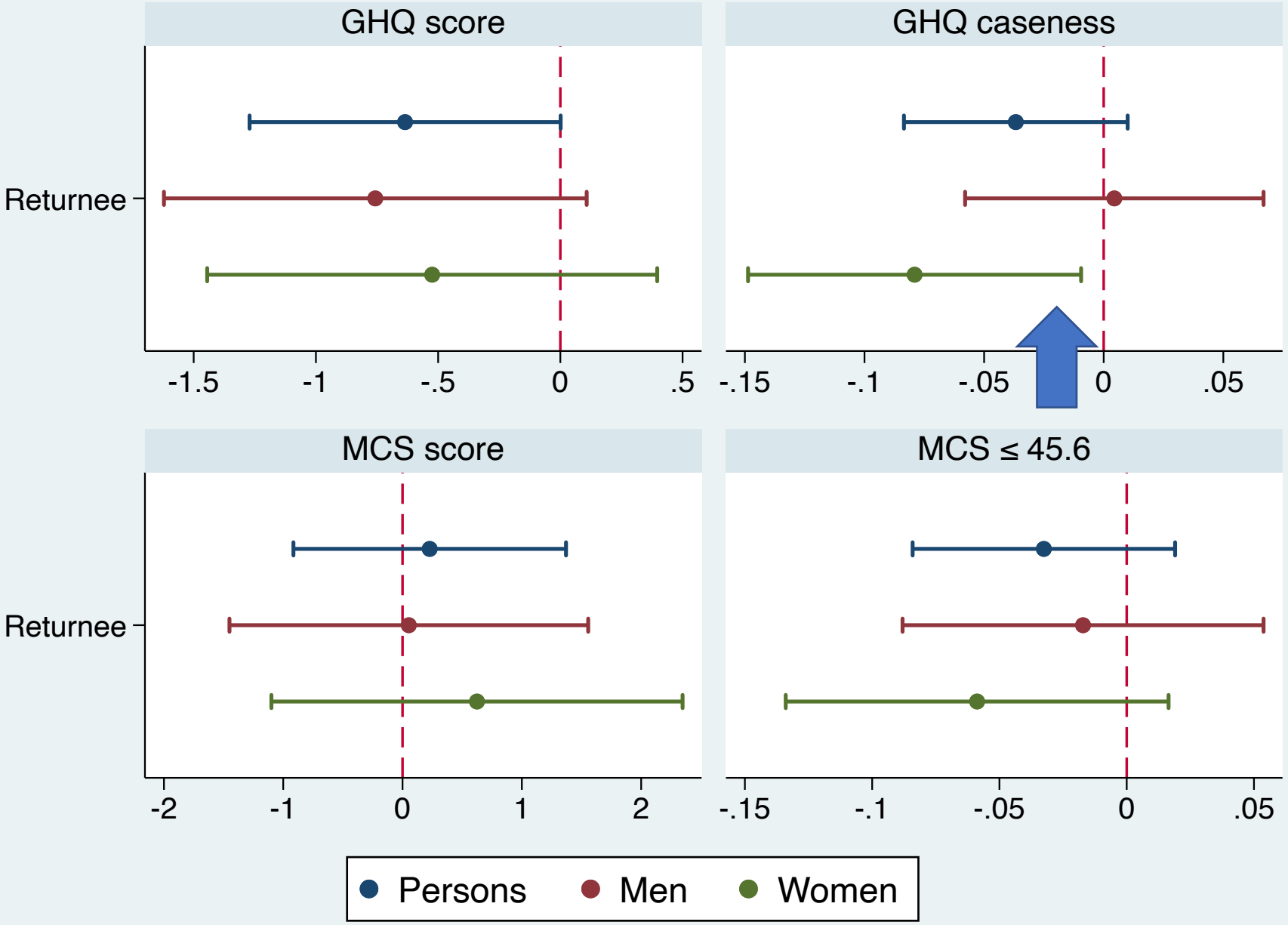
Data source: UKHLS 2009-2020, analysis Wu & Grundy

Results from Logistic Regression Analysis of Factors Associated with Returns to the Parental Home



Data source: UKHLS 2009-2020; analysis Wu & Grundy

Results from FE Model Analysis of the Effects of Returning to the Parental Home on Change in Young Adults' Mental Well-being



Data source: UKHLS 2009-2020; analysis Wu & Grundy

Conclusion

- Poor mental health and partnership dissolution were associated with higher odds of returns to parental home while being persistently partnered, older age, and living with biological child(ren) were associated with lower odds of returns

- In contrast to previous adverse results (Caputo, 2020; Copp et al., 2015; Nauck & Ren, 2021), we found no evidence that returning to the parental home was associated with decline in mental well-being for young adults.

- On the contrary, there seemed to be slight improvement in mental well-being for female returnees.

Health effects of parental deaths among adults in Norway

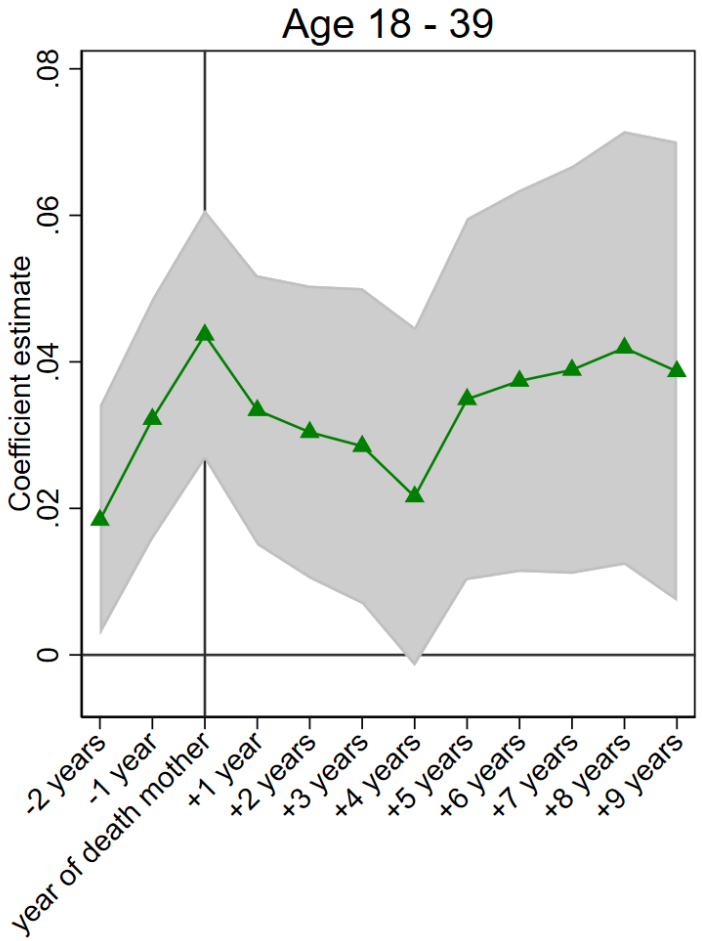
- Death of parent may cause grief and stress, which is detrimental for mental and physical health
- With parental death an important source of social support for adult children disappears
- Under certain circumstances possibly also beneficial effects: relief when death occurs after severe illness, inheritance….
- The impact of parental deaths may be contingent on the age of the adult child

Data and methods

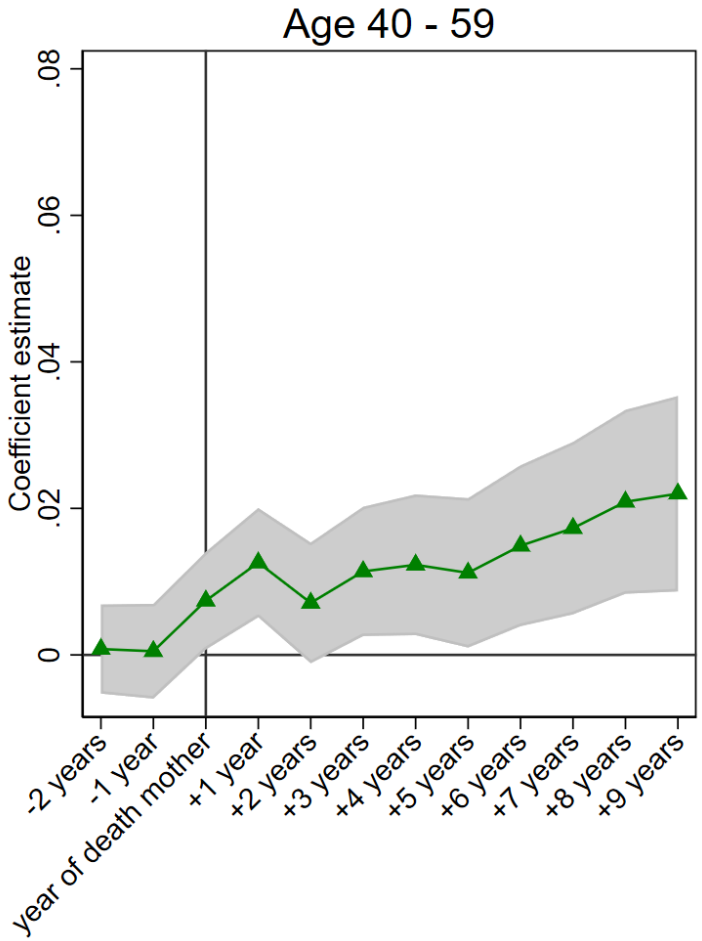
- Norwegian Central Population Register data (n=3.0M – 6.1M), from 2004-2008
- Adults aged 18-59
- Purchases of prescription medicine used to measure health
- Individual fixed effects Poisson regression analyses to predict (change in) number of number of different medicines purchased per year

Kravdal Ø, Grundy E. Health effects of parental deaths among adults in Norway: Purchases of prescription medicine before and after bereavement. SSM Popul Health. 2016

Death of mother and prescription medicine purchase

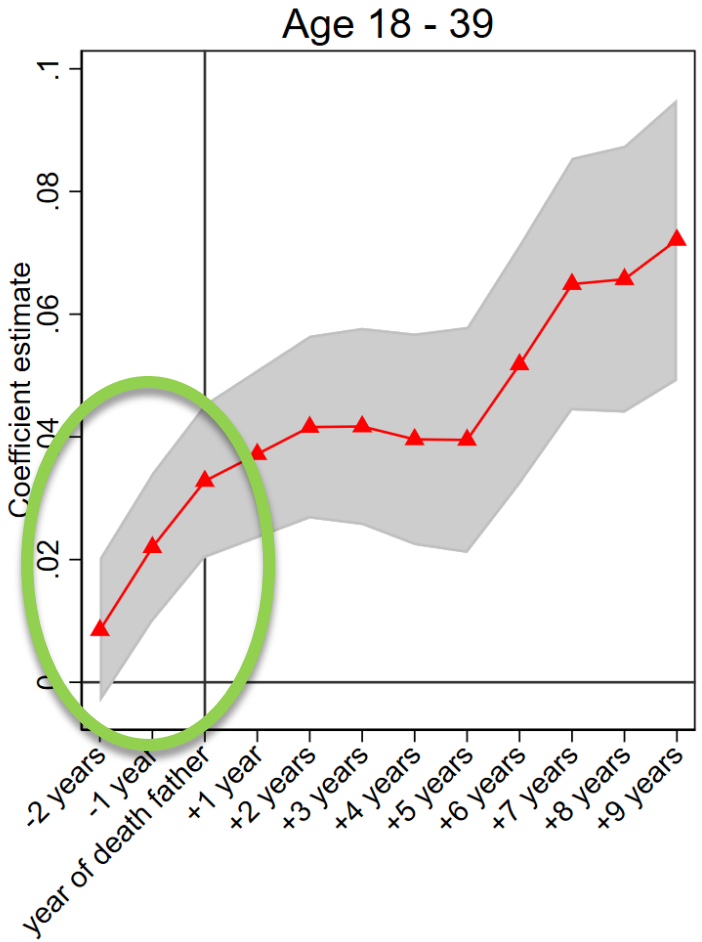


Source: Norwegian Central Population Register (n=6.08M)

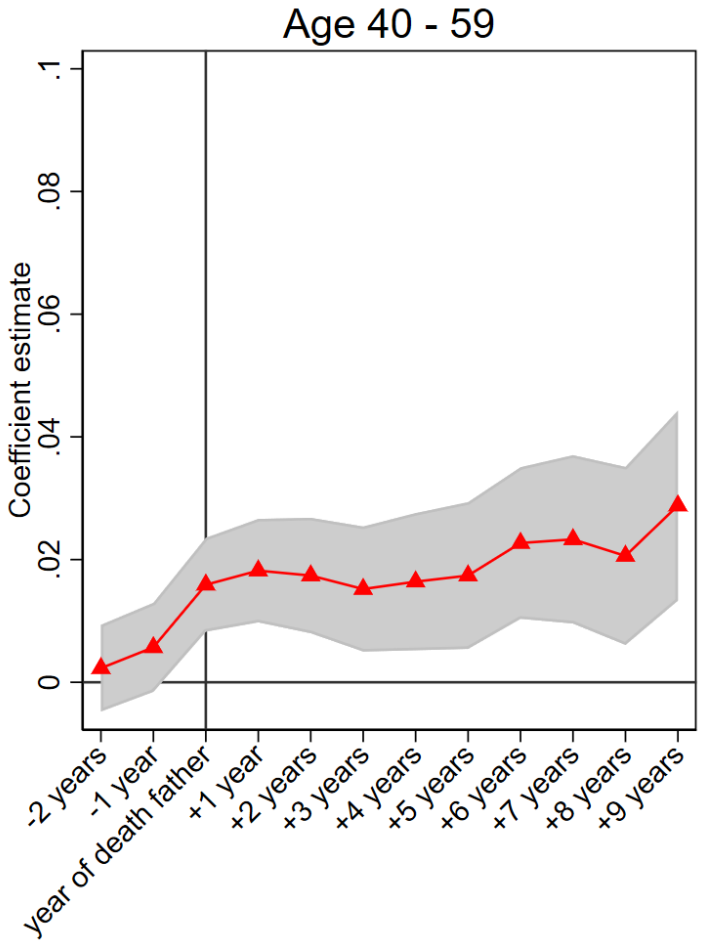


Source: Norwegian Central Population Register (n=4.25M)

Death of father and prescription medicine purchase



Source: Norwegian Central Population Register (n=5.78M)



Source: Norwegian Central Population Register (n=3.04M)

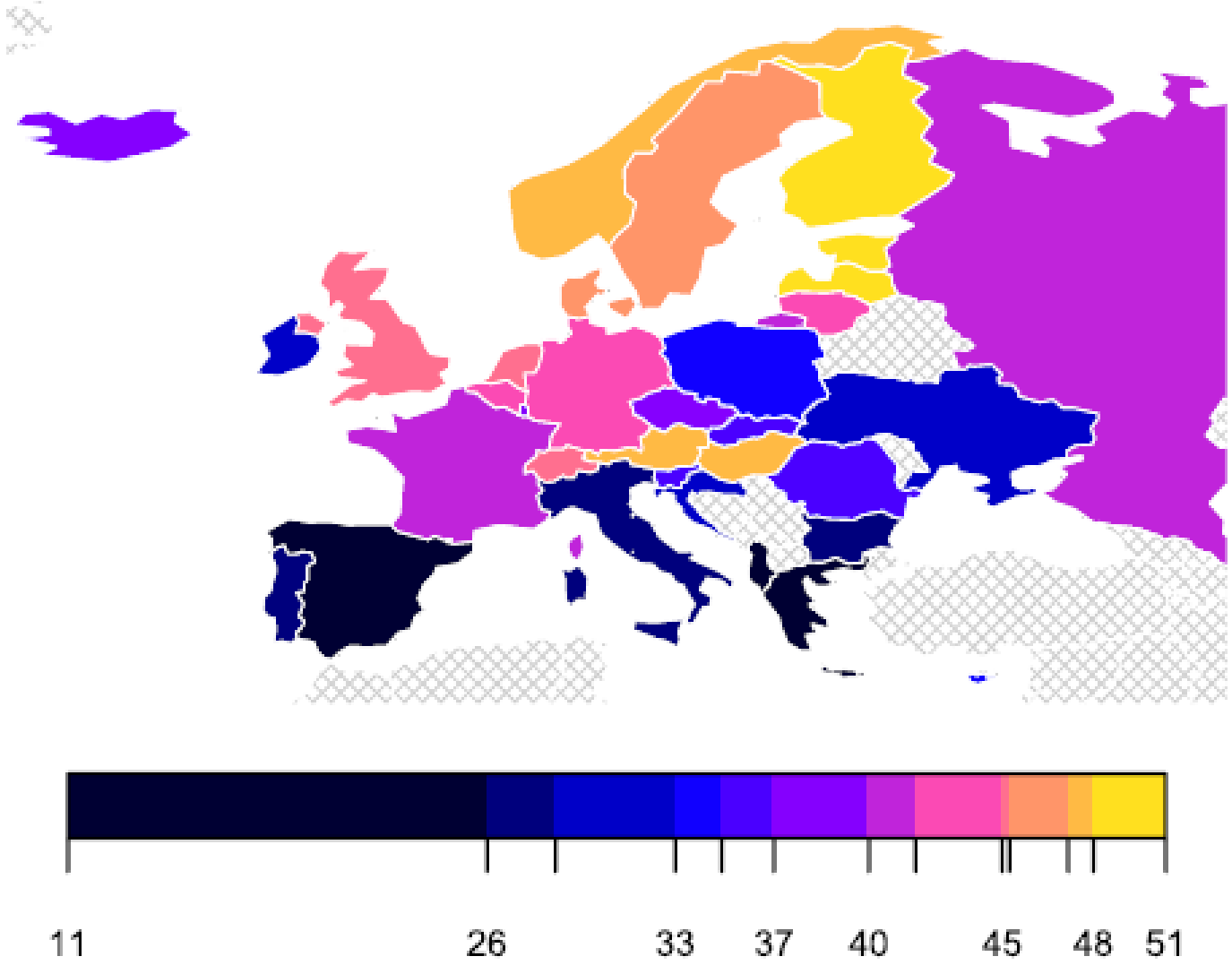
Discussion:

- Family life courses and living arrangements are major influences on health and well-being in later-life
- Intergenerational relationships and exchanges also an important influence – for older (and younger) people
- 'Linked lives' across the generations – events and circumstances of individuals impact on wellbeing of other family members
- Impact and extent of both depends on contextual influences, including policy
- Family and social contacts important influences on mental health in later life: availability of children especially important in Eastern Europe.

Major methodological challenges, new ideas needed!

-

Proportion of older women living alone



The latent growth curve model

Is fertility history associated with level and rate of change in cognitive functioning?

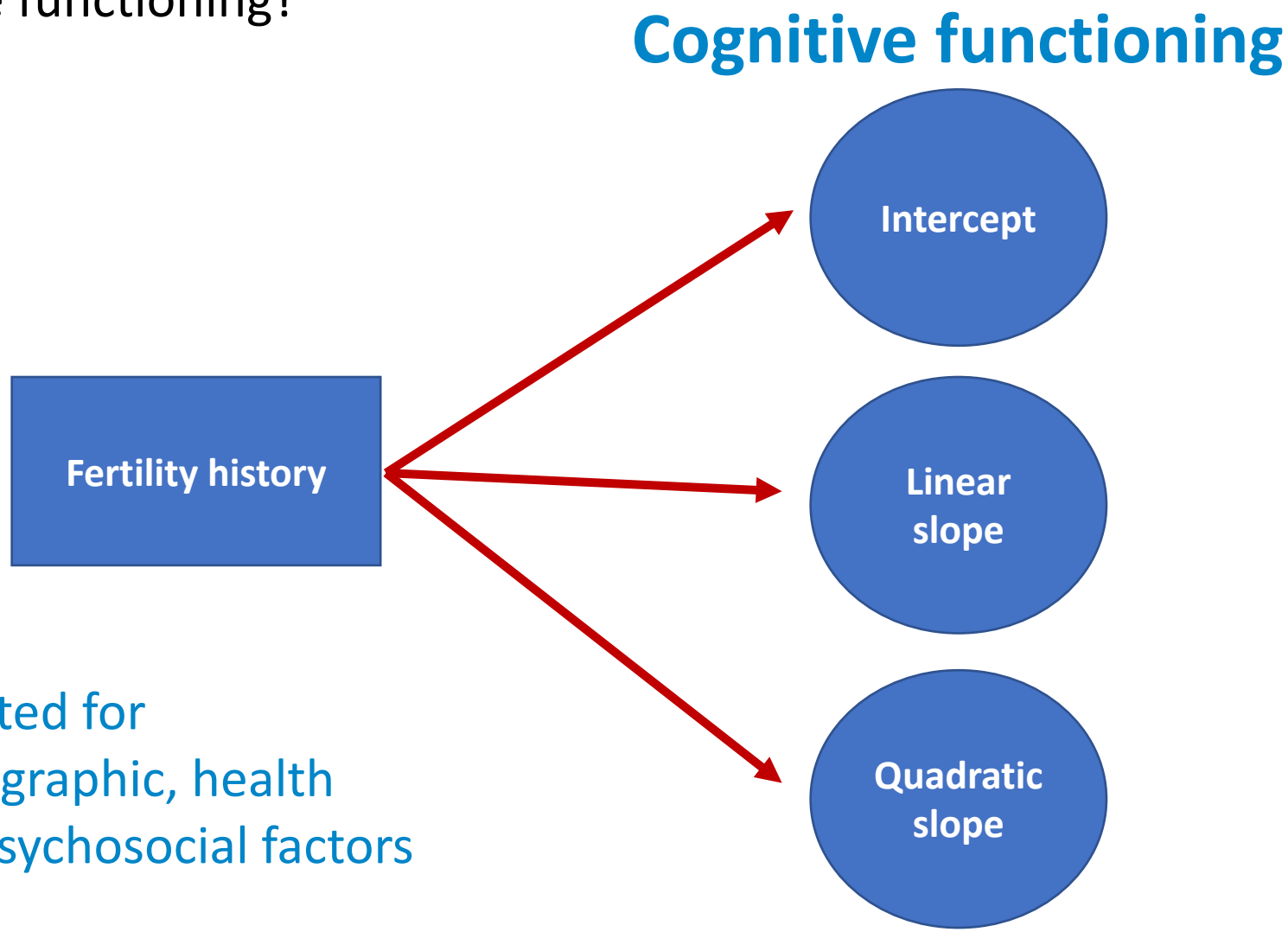
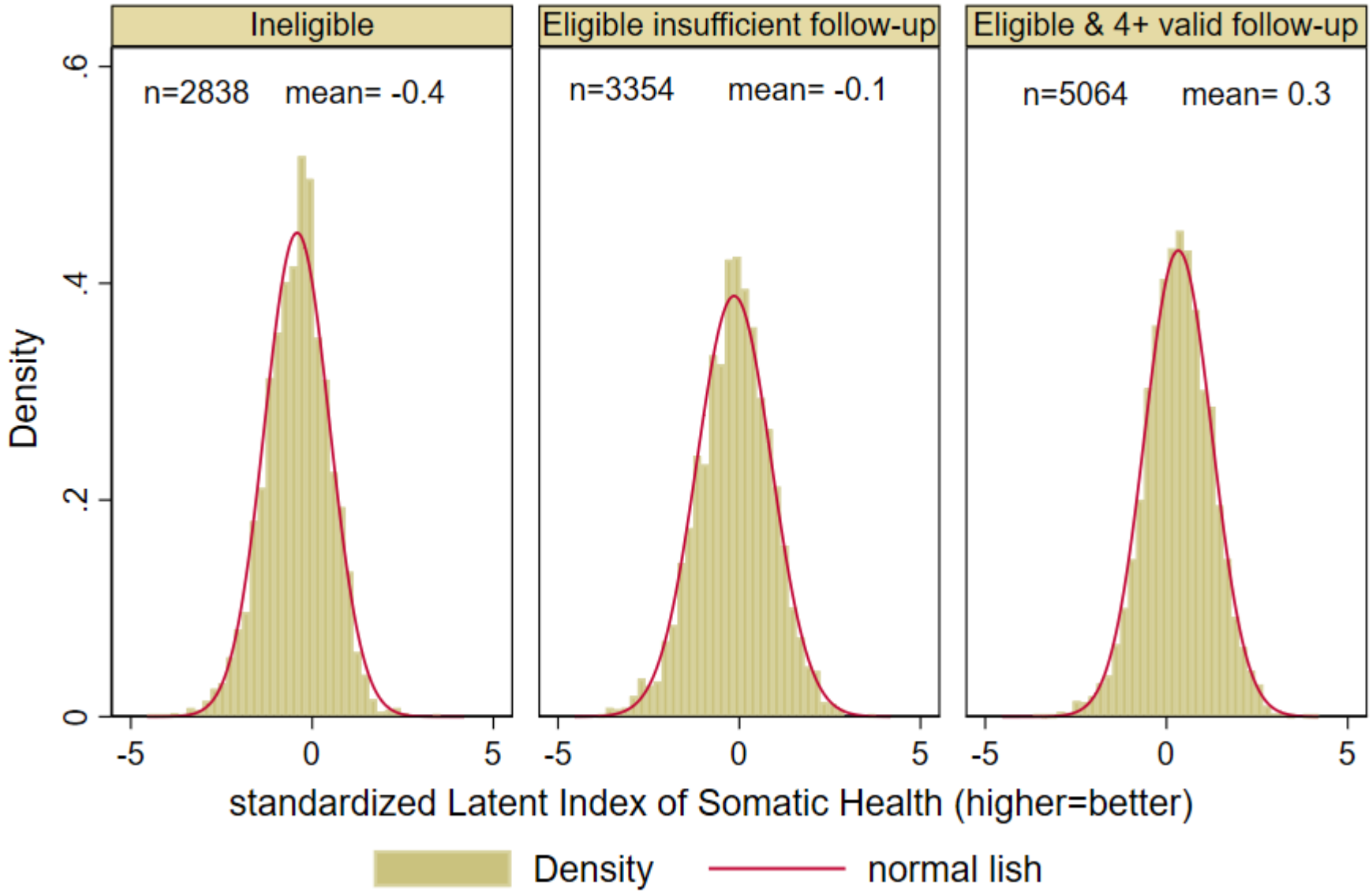


Figure 1S. Mean Latent Index of Somatic Health (LISH) by groups across sample selection



Young Adults' mental well-being at first interview by living arrangements (N = 9,714)

Data source: UKHLS 2009-2020; analysis Wu & Grundy.