

Effects of Parental Death on Labor Market Outcomes: a source-faithful replication protocol

Bolero

Abstract

Mathias Fjællegaard Jensen and Ning Zhang's 2026 journal study is the scientific source. This document is the prepared, results-unfilled replication manuscript; it is not an empirical replication report. Conversion status and evidence status are distinct.

Parental death may affect adult labor supply through bereavement, changes in health and the loss or reorganization of family support. We prepare a replication of the journal study using its Danish register populations, sudden first-parental-death definition, matched difference-in-differences specifications and reported supplementary analyses. The source labor population comprises adults aged 25–50 at first parental death during 1985–2014, with outcome-specific observation windows. The prepared analyses retain employment, pension-contribution proxies, earnings, health services, joint treatment/earnings onsets, childcare, surviving-parent care, wealth, family formation, spouses and job choices. Current replication evidence is unfilled: *[pending]*. Several source definitions conflict with the inspected code, and some auxiliary mappings and prose-only specifications are unavailable. Affected estimates will remain unavailable unless source-supported clarification resolves the exact decision. No empirical replication or independent scientific review has occurred, and no replication-success threshold is introduced.

Keywords: Parental death; bereavement; labor supply; family support; Danish registers; replication.

PRE-DATA DRAFT: empirical placeholders are not findings.

Introduction

The death of a parent is both a personal loss and a change in the organization of a family. For an adult child, its labor-market consequences can involve grief, mental-health treatment, support previously provided by the deceased parent, and care for a surviving parent. These mechanisms need not affect women and men in the same way, nor need the loss of a mother and a father have the same consequences. The

fixed question in Jensen and Zhang²⁰²⁶ is how first parental death affects adult labor outcomes and what the accompanying health and family-support evidence reveals about these consequences.

The source focuses on sudden deaths to reduce the anticipation associated with prolonged parental illness. Its matched design compares bereaved adults with observably similar adults whose parents remain alive during the relevant window. The source also presents uncontrolled event studies, an alternative future-treated comparison and heterogeneity analyses. These components serve different inferential purposes. Descriptive age distributions delimit the population; event paths show timing; matched contrasts address counterfactual outcomes under the source assumptions; health and family patterns inform possible explanations. The replication preserves those roles without treating a coherent explanation as identified causal mediation.

This manuscript extracts the journal’s scientific specification and preserves the order of its main results and available supplement. It does not propose a new research question or use novelty as a selection criterion. The original paper and journal-linked supplement define the targets. Available author programs clarify implementation where they agree with those targets. Where primary sources disagree, neither the paper nor code is silently selected: the exact unresolved decision and affected target are retained. This is particularly consequential for matching, some subgroup definitions and the interpretation of post-event summaries.

The replication’s eventual contribution is a transparent account of which source targets can be reproduced under the same specification, their actual estimates and uncertainty, and the limits of the remaining scope. It is not an automatic confirmation exercise. Published values are reference targets only; no published number is inserted into a replication-result slot, used as a target for tuning, or treated as a prior power calculation.

Institutional setting and source positioning

The source studies Denmark’s population registers and family linkages within the historical period relevant to the original analyses. Its institutional discussion describes publicly supported health services, childcare and eldercare, alongside family-provided support and arrangements affecting inheritance after a first spouse’s death. These descriptions motivate why bereavement, informal care and bequests may have distinct roles. They are statements of the source context, not current legal advice or claims that every family follows a single arrangement.

The paper positions itself within work on family health shocks, adult labor supply, bereavement and informal care. We retain this framing without conducting a new novelty comparison or importing an estimator from related literature. The source’s use of future-treated controls is reproduced only to the extent defined in its own supplement/programs. Its statements about other countries remain interpretive propositions; the original supplies no international estimation sample to rebuild here.

Data and cohort construction

The source links population and family records, death causes, labor income, ATP contributions, employment characteristics, education, health encounters, prescriptions, wealth and childcare enrollment. Planning is permitted across all 531 FSV tables in the supplied boundary. Eighteen relevant registers are named in the Atom registrations and field-level schema audit. This permission does not establish that historical extracts are mounted, linkable or complete. No confidential data have been read for this conversion.

The main labor panel spans 1980–2019. Treated adults are 25–50 in the year of a sudden first parental death during 1985–2014. Both parents must be known, have usable birth information and be present in the population before the event under the source rule. The source final sudden-death classification includes cause 49-list codes 24, 25, 26, 29, 46, 47, 49. Broader intermediate age/cause pools in cleaning are followed by explicit final restrictions and are not independent alternative cohorts. Event time is calendar year minus death year, ordinarily -5 through 5 with -1 the reference. Simultaneous parental deaths and consequential ambiguous linkage/duplicate cases retain explicit source boundaries.

Health and childcare windows differ from the main labor window. Private services begin 1990, prescriptions 1995, and the hospital panels use source restrictions through 2018. Formal-care analysis starts 2005 and requires the full original window. The exact resulting samples are outcome-specific and will be reported; we do not force a common health/labor sample absent source support. Historical FSV coverage and field names require source-vintage verification. In particular, current LMDB documentation exposes PNR12 rather than the PNR used by author programs; an authenticated pseudonym map is required. Missing auxiliary education, geography, inflation and private-service crosswalks are input boundaries.

Employment is positive ATP contributions. Conditional and unconditional ATP margins remain distinct proxies rather than measured work hours. Labor earnings include employment and self-employment and are expressed in real 2020 DKK, with source winsorization and indexing stages. Indexed earnings use the source baseline mean in the relevant sex/subgroup; rank outcomes use the annual comparison population. The health measures record services or prescriptions, not directly observed mental-health diagnoses or care hours. Childcare measures are enrollment indicators for the linked youngest child. Wealth is net assets, not observed inheritance. Cohabitation and number of linked children retain their original definitions.

Source sample composition and the introductory age/suddenness shares will be reported from actual outputs: *[pending]* *[pending]*. Unavailable exact-age or denominator decisions remain visible. The main baseline table follows the original order and distinguishes sudden/non-sudden means, source tests and counts: *[pending]*. No published sample count is presumed to recur.

The following are editable table shells for the source targets already named above. An em dash means an unfilled empirical cell, not zero or an unavailable result. At drafting, the existing registered table output supplies its source-defined rows, estimates, standard errors, sample counts and units. A source conflict is stated in the affected

cell or note. It is never filled from the published numerical table. Source subgroup columns are expanded within these shells; the shells add no estimates or tests.

Table 1. Baseline characteristics by death type

Binding: *[pending]*. Baseline is event year -1 in the source balanced adult-child panel. The final row is a sample count; the intensive-margin row is conditional on positive ATP. The p-value column contains only the source pooled-variance two-sample comparison.

Characteristic, in source order	Sudden mean	Non-sudden mean	Source p-value
Adult age	—	—	—
Male	—	—	—
College or above	—	—	—
High school or vocational education	—	—	—
Below high school	—	—	—
Cohabitation	—	—	—
Number of children, capped at five	—	—	—
Age of youngest child	—	—	—
Child under six	—	—	—
Mother age	—	—	—
Father age	—	—	—
Mother married	—	—	—
Father married	—	—	—
First-deceased parent age	—	—	—
Employment	—	—	—
Intensive margin, conditional on working	—	—	—
Annual earnings, real 2020 DKK	—	—	—
Observations	—	—	—

Identification and estimation

The descriptive specification estimates sex-specific event coefficients without matched controls, including age-by-year and education-by-year categorical controls and source robust standard errors. Its percentage scaling requires a counterfactual fitted mean. The author prediction/collapse population disagrees with the sex-specific description, so the relevant plotted paths remain blocked until that denominator is established. An unscaled substitute is not presented as the original figure.

The main design uses nearest-neighbor Mahalanobis matching and difference-in-differences. The journal describes exact sex, earnings and young-child groups plus categorical matching covariates and three-year labor histories. The code combines some of those cells and uses a different explicit history vector. Both descriptions are

retained in the matching audit, and all affected sample-dependent estimates stop until correspondence is determined. Source software versions, consequential matching ties and force-dropped duplicates also require exact handling. No caliper, balancing threshold, propensity score or redesigned match is added.

The source dynamic model includes treatment-by-event-time coefficients, event-time effects, calendar-year effects, age effects and individual-by-match fixed effects. Standard errors cluster at individual-by-match. The reference event year is-1. A source post-period specification replaces dynamic coefficients with treatment-by-post; a parent-gender specification separates mother and father death interactions. The program includes event year0 in post whereas prose refers to five years after death; this ambiguity is retained for aggregate summaries. The age/year normalization described in the source must either be shown algebraically equivalent for the treatment contrast or clarified before dependent estimates are produced.

Causal interpretation relies on the source counterfactual-trend and anticipation assumptions, adequate identifying variation, and faithful measurement. Event paths are displayed as the source reports them. We do not add pretrend tests, revised controls or a different staggered-DiD estimator. Removing already-treated comparisons does not by itself prove identification. Source95% intervals, standard errors and reported F/p comparisons are retained with their actual model covariance and software semantics. There is no added multiplicity correction, significance cutoff, equivalence band or replication-success score.

The health, childcare, surviving-parent, inheritance and spouse analyses use their own source-specific samples and definitions. Joint earnings/treatment onsets are associations in timing, not identified mediation effects. Illness measured after the first death is a post-event classification. Differences by that illness or by family structure must be interpreted with their selection limits. A source input or model failure is not a statistical null; imprecise but valid estimates remain actual evidence with their uncertainty.

Main results

Labor outcomes and parent gender

Figure1 will present employment, conditional ATP, raw earnings and indexed earnings in the source panel order. Both sexes' event paths, uncertainty and source-reported post-period/gender summaries remain visible: *[pending]*. Figure2 will present the mother/father-by-adult-gender earnings contrasts: *[pending]*. The evidence-based account of magnitudes, timing, gender differences and identification limits is *[pending]*. If estimates are mixed across outcomes or horizons, the account will describe the differences rather than reduce them to a single confirmation state. If the matching specification remains unresolved, these figures report that boundary and make no directional claim.

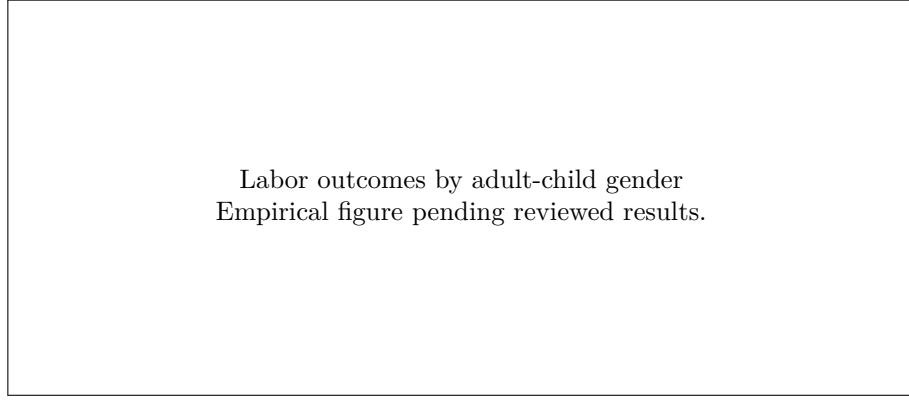


Fig. 1 Replication of source Figure1: Labor outcomes by adult-child gender. A: Employment (Probability). B: ATP conditional working (ATP contribution units). C: Raw earnings (1000 real 2020 DKK). D: Indexed earnings (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

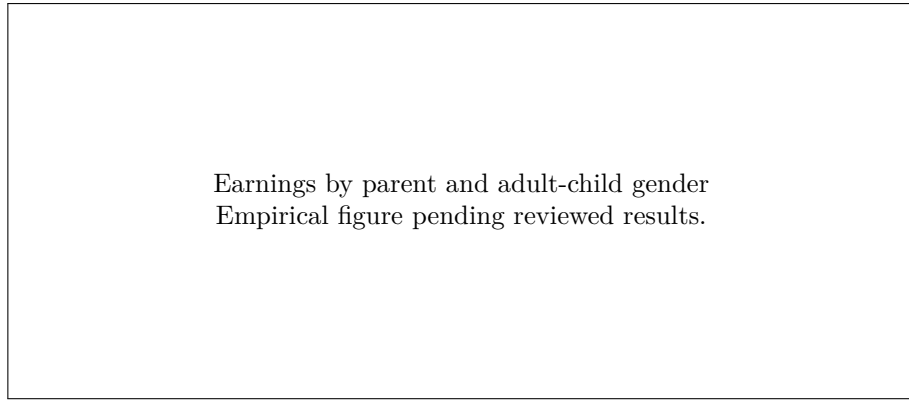


Fig. 2 Replication of source Figure2: Earnings by parent and adult-child gender. A: Indexed earnings (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

Health and joint timing

Figure3 will present psychologist visits, any mental prescriptions, any opioid prescriptions and hospital visits, preserving outcome-specific samples and mother/father-by-sex contrasts: *[pending]*. The private-psychiatrist prose target has its own disposition: *[pending]*. The actual service-use evidence and its limits are *[pending]*. An increase in treatment utilization, if observed, is consistent with several health responses and is not by itself a measure of latent disease severity.

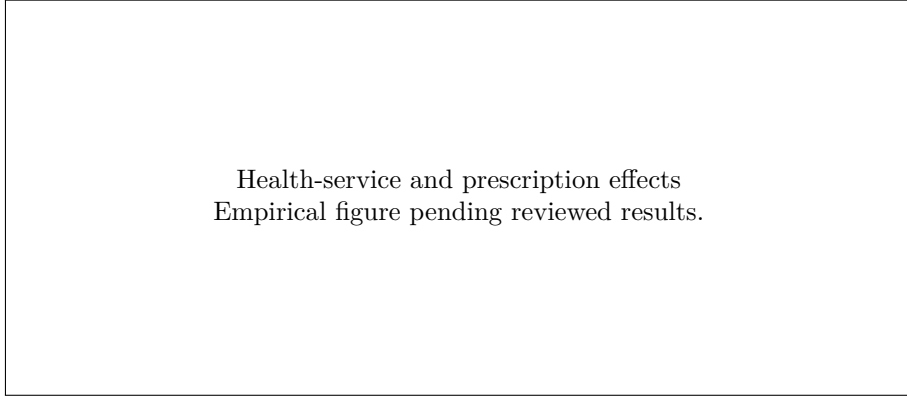


Fig. 3 Replication of source Figure3: Health-service and prescription effects. A: Psychologist visits (Visits per year). B: Any mental prescriptions (Probability). C: Any opioid prescriptions (Probability). D: Hospital visits (Visits per year). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

Figure4 will show the source earnings-decline indicator, earnings-decline onset, mental-prescription onset and their joint onset: *[pending]*. The four source conditional-share comparisons are *[pending]*, with the unresolved event-year and denominator mapping stated when necessary. The source-based timing interpretation is *[pending]*. If a joint effect is unavailable or its denominator is undefined, no share is reported. Even fully available joint paths do not identify the fraction of the earnings effect caused by health.

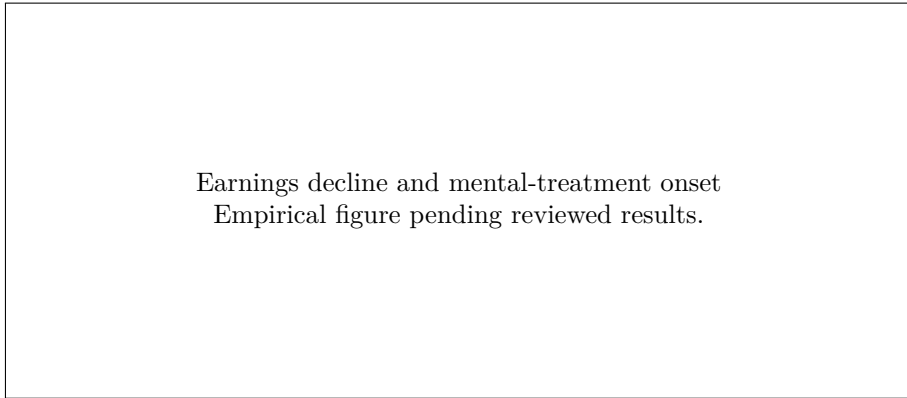


Fig. 4 Replication of source Figure4: Earnings decline and mental-treatment onset. A: Earnings decline of at least 5% (Probability). B: Start of earnings decline (Probability). C: Start of mental prescriptions (Probability). D: Joint mental and earnings onsets (Probability). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Caption Eq4 versus dynamic code Eq2 remains C05. Actual results and availability: *[pending]*.

Childcare and surviving-parent support

Figure5 will show the source earnings contrasts by young-child status and parent gender: *[pending]*. Its childless-adult eligibility disagreement is retained. The childcare interpretation, incorporating the supplementary enrollment evidence, is *[pending]*. If the source earnings differences or formal-care responses differ across sexes or age groups, those patterns and their uncertainty will be reported separately. No additional subgroup resolves an unavailable original contrast.

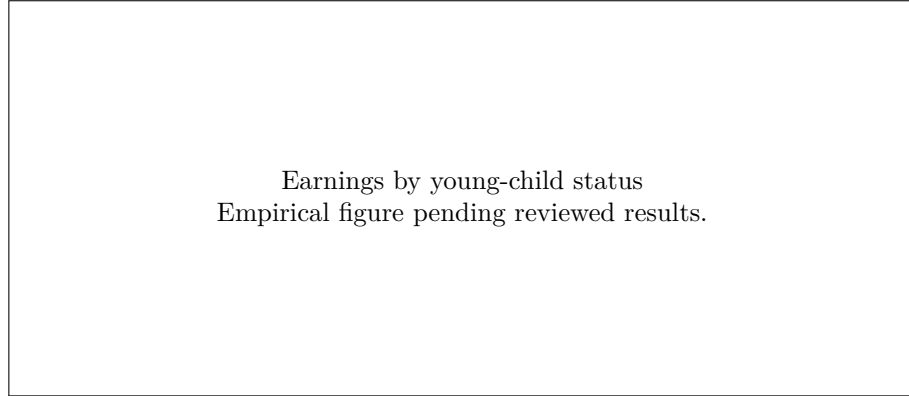


Fig. 5 Replication of source Figure5: Earnings by young-child status. Mother: Mother death (Index points; baseline 100). Father: Father death (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Eligibility conflict C06 remains unresolved. Actual results and availability: *[pending]*.

Figure6 will show the source surviving-parent-health earnings comparison: *[pending]*. Illness prevalence and the prose mental-prescription comparison have separate dispositions: *[pending]* *[pending]*. The complete evidence-based interpretation is *[pending]*. Conflicts about accumulated versus annual hospital days, the post window, the2019 coverage gap and model labels prevent a substituted illness definition. Earnings, residence and prescriptions are interpreted as distinct pieces of evidence; none alone establishes a causal effect of eldercare.

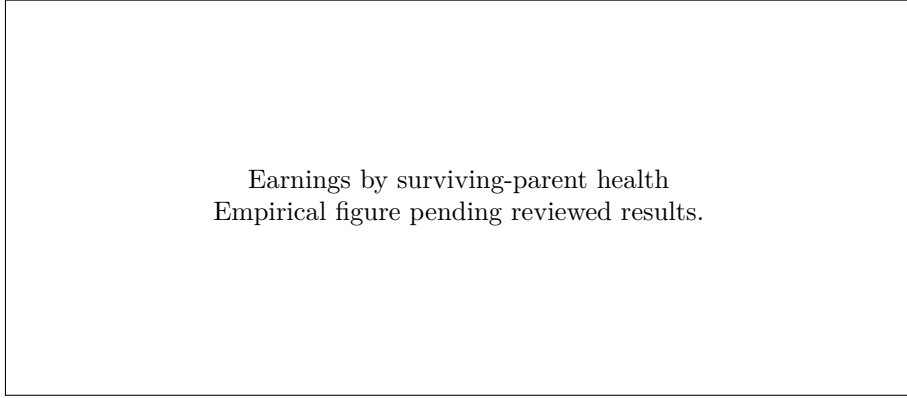


Fig. 6 Replication of source Figure6: Earnings by surviving-parent health. A: Surviving-parent health after death (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Illness definition, calendar coverage and model conflicts C05/C07. Actual results and availability: *[pending]*.

Supplementary results in original display order

Manuscript Figures 7–29 reproduce source Figures B1–B23 in that order. B-series figure labels in the discussion below identify the original supplement; the corresponding manuscript number is six larger. Original supplementary table labels B1–B6 are retained directly.

The supplementary descriptive displays begin with the cumulative age-at-first-death distribution (B1), first-deceased-parent gender (B2), parental-age distribution (B3) and adult-age distribution (B4). Their current results are respectively *[pending]*, *[pending]*, *[pending]* and *[pending]*. B1’s denominator is the source death-period sample rather than an age-specific risk population. B1’s 40–45 label versus coded 40–44 category, B3’s age-variable disagreement and unknown exact histogram edges remain visible. The affected original target is not silently relabelled or rebinned. The population/comparability interpretation is *[pending]*.

Cumulative age distribution of first parental death
Empirical figure pending reviewed results.

Fig. 7 Replication of source FigureB.1: Cumulative age distribution of first parental death. A: Age at first parental death (Cumulative percent). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Source denominator is deaths1985–2014, not an age-specific population risk; A04. Actual results and availability: *[pending]*. The source40–45 label versus coded40–44 category is retained as an affected-bin boundary (A04).

First-deceased parent gender
Empirical figure pending reviewed results.

Fig. 8 Replication of source FigureB.2: First-deceased parent gender. A: Parent gender by suddenness (Percent). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

First-deceased parent age distribution
Empirical figure pending reviewed results.

Fig. 9 Replication of source FigureB.3: First-deceased parent age distribution. A: Parent age at first death (Density). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Source age variable mismatch C03; exact bins A04. Actual results and availability: *[pending]*.

Adult-child age distribution at first parental death
Empirical figure pending reviewed results.

Fig. 10 Replication of source FigureB.4: Adult-child age distribution at first parental death. A: Adult age at first death (Density). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Exact source histogram edges required; A04. Actual results and availability: *[pending]*.

The sudden-death descriptive paths B5 are *[pending]*. TablesB1 andB2 extend the baseline summaries by deceased-parent gender/suddenness and by both parent/child gender: *[pending]* *[pending]*. TableB3 records treatment/control means of the source targeted and non-targeted variables: *[pending]*. These means are part of the matched labor protocol, not a new balance experiment with a pass/fail threshold. The under-six-row conflict is reported rather than repaired.

Descriptive sudden-death paths
Empirical figure pending reviewed results.

Fig. 11 Replication of source FigureB.5: Descriptive sudden-death paths. A: Employment (Percent of counterfactual mean). B: ATP conditional working (Percent of counterfactual mean). C: Raw earnings (Percent of counterfactual mean). D: Any mental prescriptions (Percent of counterfactual mean). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Prediction denominator C04. Actual results and availability: *[pending]*.

Tables B1 and B2. Source gender-specific baseline summaries

The characteristic rows below follow Table 1 under the source-specific column structures. They contain source means and counts, not newly added t-tests. B1 binding: *[pending]*. B2 binding: *[pending]*.

B1 characteristic	Mother, sudden	Mother, non-sudden	Father, sudden	Father, non-sudden
Adult age	—	—	—	—
Male	—	—	—	—
College or above	—	—	—	—
High school or vocational education	—	—	—	—
Below high school	—	—	—	—
Cohabitation	—	—	—	—
Number of children, capped at five	—	—	—	—
Age of youngest child	—	—	—	—
Child under six	—	—	—	—
Mother age	—	—	—	—
Father age	—	—	—	—
Mother married	—	—	—	—
Father married	—	—	—	—
First-deceased parent age	—	—	—	—
Employment	—	—	—	—
Intensive margin, conditional on working	—	—	—	—

B1 characteristic	Mother, sudden	Mother, non-sudden	Father, sudden	Father, non-sudden
Annual earnings, real 2020 DKK	—	—	—	—
Observations	—	—	—	—

B2 characteristic, sudden deaths	Mother– daughter	Father– daughter	Mother–son	Father–son
Adult age	—	—	—	—
Male	—	—	—	—
College or above	—	—	—	—
High school or vocational education	—	—	—	—
Below high school	—	—	—	—
Cohabitation	—	—	—	—
Number of children, capped at five	—	—	—	—
Age of youngest child	—	—	—	—
Child under six	—	—	—	—
Mother age	—	—	—	—
Father age	—	—	—	—
Mother married	—	—	—	—
Father married	—	—	—	—
First-deceased parent age	—	—	—	—
Employment	—	—	—	—
Intensive margin, conditional on working	—	—	—	—
Annual earnings, real 2020 DKK	—	—	—	—
Observations	—	—	—	—

Table B3. Matching-target and other baseline characteristics

Binding: *[pending]*. The source-variable roster below preserves the registered targeted/non-targeted distinction. These descriptive means are not a balance gate and do not introduce standardized-difference cutoffs. The unconditional ATP definition here is distinct from Table 1’s conditional intensive margin. The under-six discrepancy retains an explicit note until resolved.

Source characteristic	Treated mean	Control mean	Source sam- ple/definition note
Adult age	—	—	Source targeted row
Male	—	—	Source targeted row
College or above	—	—	Source targeted row
High school/vocational education	—	—	Source targeted row
Below high school	—	—	Source targeted row
Cohabitation	—	—	Source targeted row
Number of children	—	—	Source targeted row
Youngest-child age	—	—	Source targeted row
Child under six	—	—	Source targeted row
Mother age	—	—	Source targeted row
Father age	—	—	Source targeted row
Employment	—	—	Source targeted row
Unconditional ATP contribution	—	—	Source targeted row
Annual earnings, source raw measure	—	—	Source targeted row
Public-sector employment	—	—	Source targeted row
Mother: any hospital contact	—	—	Source non-targeted row; coverage as specified
Father: any hospital contact	—	—	Source non-targeted row; coverage as specified
Adult: GP count	—	—	Source non-targeted row; coverage as specified

Source characteristic	Treated mean	Control mean	Source sample/definition note
Adult: any hospital contact	—	—	Source non-targeted row; coverage as specified
Adult: any psychologist contact	—	—	Source non-targeted row; coverage as specified
Adult: any psychiatrist contact	—	—	Source non-targeted row; coverage as specified
Adult: any mental-health prescription	—	—	Source non-targeted row; coverage as specified
Adult: any alcohol-treatment prescription	—	—	Source non-targeted row; coverage as specified
Adult: any opioid prescription	—	—	Source non-targeted row; coverage as specified
Source counts	—	—	—

B6 compares unconditional and conditional ATP: *[pending]*. B7 gives parent-specific dynamic labor panels: *[pending]*. B8 reports annual earnings ranks: *[pending]*. Source footnote robustness with parental health, second-death spacing, own-health matching and linear controls remains in its original scientific scope: *[pending]* *[pending]* *[pending]* *[pending]*. Missing full specifications receive no estimate; the replication does not create a battery from the phrase one or more health variables.

Unconditional and conditional ATP margins
Empirical figure pending reviewed results.

Fig. 12 Replication of source FigureB.6: Unconditional and conditional ATP margins. A: ATP including zeros (ATP contribution units). B: ATP conditional working (ATP contribution units). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

Dynamic labor effects by parent gender
Empirical figure pending reviewed results.

Fig. 13 Replication of source FigureB.7: Dynamic labor effects by parent gender. A_Mother: A. Employment: mother (Probability). A_Father: A. Employment: father (Probability). B_Mother: B. ATP conditional working: mother (ATP contribution units). B_Father: B. ATP conditional working: father (ATP contribution units). C_Mother: C. Raw earnings: mother (1000 real 2020 DKK). C_Father: C. Raw earnings: father (1000 real 2020 DKK). D_Mother: D. Indexed earnings: mother (Index points; baseline 100). D_Father: D. Indexed earnings: father (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Caption Eq4 versus source Eq2 dynamic coefficients; C05. Actual results and availability: *[pending]*.

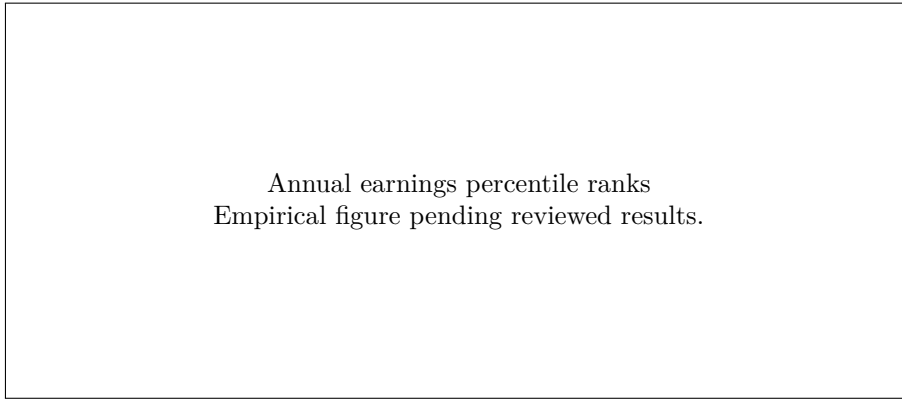


Fig. 14 Replication of source FigureB.8: Annual earnings percentile ranks. A: Earnings rank (Percentile points). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

B9 reports alcohol-prescription counts and GP visits: *[pending]*. B10 gives the dynamic health panels: *[pending]*. B11 separates screening and nonscreening hospital visits under the final consuming source definition: *[pending]*. B12 supplies the further psychologist/opioid-onset and hospital-count co-occurrence panels: *[pending]*. The hospital interaction is a visit count times earnings onset, not an invented binary hospital onset. Related evidence is interpreted with the main health and co-occurrence modules.

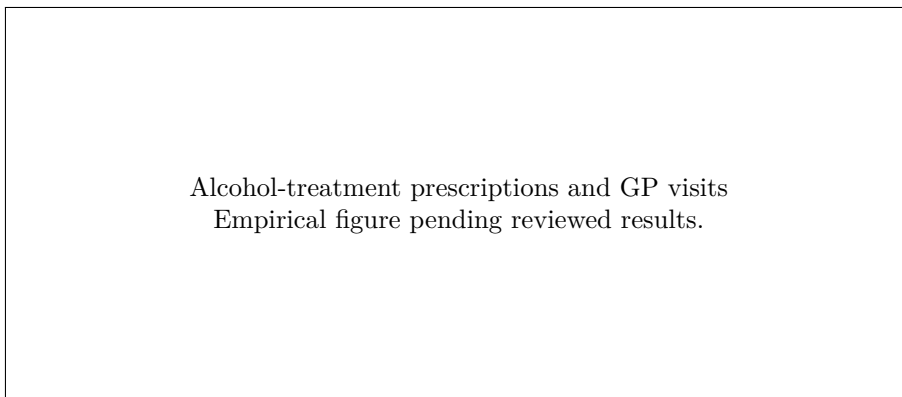


Fig. 15 Replication of source FigureB.9: Alcohol-treatment prescriptions and GP visits. A: Alcohol prescriptions (Records per year). B: GP visits (Visits per year). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

Dynamic health effects by parent gender
Empirical figure pending reviewed results.

Fig. 16 Replication of source FigureB.10: Dynamic health effects by parent gender. A_Mother: A. Psychologist visits: mother (Visits per year). A_Father: A. Psychologist visits: father (Visits per year). B_Mother: B. Any mental prescriptions: mother (Probability). B_Father: B. Any mental prescriptions: father (Probability). C_Mother: C. Any opioid prescriptions: mother (Probability). C_Father: C. Any opioid prescriptions: father (Probability). D_Mother: D. Hospital visits: mother (Visits per year). D_Father: D. Hospital visits: father (Visits per year). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

Screening and nonscreening hospital visits
Empirical figure pending reviewed results.

Fig. 17 Replication of source FigureB.11: Screening and nonscreening hospital visits. A: Screening (Visits per year). B: Nonscreening (Visits per year). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

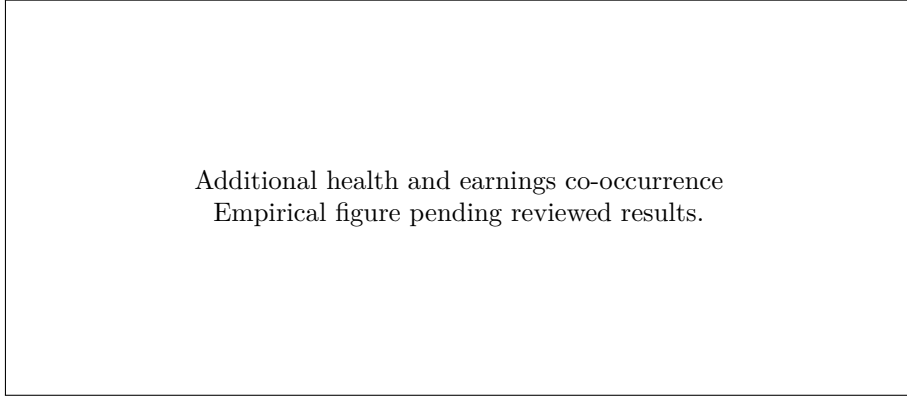


Fig. 18 Replication of source FigureB.12: Additional health and earnings co-occurrence. A: Psychologist onset (Probability). B: Joint psychologist/earnings onset (Probability). C: Opioid onset (Probability). D: Joint opioid/earnings onset (Probability). E: Hospital visits (Visits per year). F: Hospital visits $\times$ earnings onset (Visits per year). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. PanelF is hospital count times earnings-decline onset; caption/model conflict C05 remains. Actual results and availability: *[pending]*.

B13 refines youngest-child ages to 0–5 versus 6–14: *[pending]*. B14 reports formal-care enrollment: *[pending]*. The source age5 wording and youngest-child identity issues remain explicit. B15 uses the source prior-illness comparison: *[pending]*. B16 examines same-region residence as the surviving parent: *[pending]*. The unresolved pre/post illness display assignment is not selected by whichever version yields a clearer story.

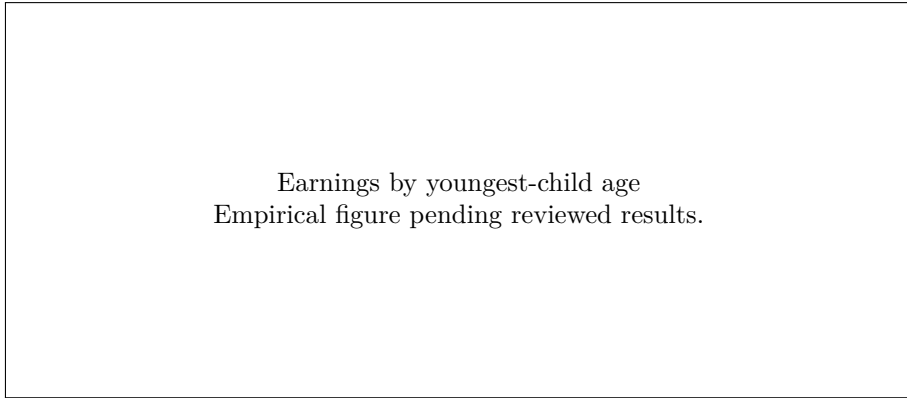


Fig. 19 Replication of source FigureB.13: Earnings by youngest-child age. Mother: Mother death (Index points; baseline 100). Father: Father death (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

Formal childcare uptake
Empirical figure pending reviewed results.

Fig. 20 Replication of source FigureB.14: Formal childcare uptake. A: Young-child enrollment (Probability). B: Older-child enrollment (Probability). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Source labels under5/above5, code<=5 and6-10; A06. Actual results and availability: *[pending]*.

Earnings by surviving-parent prior health
Empirical figure pending reviewed results.

Fig. 21 Replication of source FigureB.15: Earnings by surviving-parent prior health. A: Surviving-parent health before death (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. C05/C07. Actual results and availability: *[pending]*.

Residence near surviving parent
Empirical figure pending reviewed results.

Fig. 22 Replication of source FigureB.16: Residence near surviving parent. A: Same 11-region as surviving parent (Probability). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Pre/post illness assignment unresolved C07. Actual results and availability: *[pending]*.

B17 reports cohabitation and number of children: *[pending]*. Its interpretation is *[pending]*. Changes in a child-count stock are not automatically birth-rate effects, nor do small estimates establish that family behavior has no role. B18 reports separately matched spouse earnings after first parent-in-law death for partners with young children: *[pending]*. The spouse-specific interpretation is *[pending]*. Matching and contrast-model discrepancies are retained; the spouse population is not replaced by the main adult-child matched sample.

Cohabitation and number of children
Empirical figure pending reviewed results.

Fig. 23 Replication of source FigureB.17: Cohabitation and number of children. A: Cohabitation (Probability). B: Number of children (Children). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

Parent-in-law earnings effects
Empirical figure pending reviewed results.

Fig. 24 Replication of source FigureB.18: Parent-in-law earnings effects. A: Spouse earnings with young children (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Spouse matching and contrast ambiguities A09. Actual results and availability: *[pending]*.

B19 reports baseline regional heterogeneity: *[pending]*, retaining the five-versus-eleven-region discrepancy. B20 gives the four proximity categories: *[pending]*. B21 compares nearest-neighbor and future-treated employment/earnings paths: *[pending]*. B22 gives future-treated parent-gender earnings: *[pending]*. Source window, cluster and winsorization disagreements remain boundaries; we do not run an alternative choice and call it the source robustness. B23 presents non-sudden descriptive paths: *[pending]*. Their descriptive sudden/non-sudden interpretation is *[pending]*. Any pre-event movement is reported without a new pretrend test.

Earnings by baseline parent proximity
Empirical figure pending reviewed results.

Fig. 25 Replication of source FigureB.19: Earnings by baseline parent proximity. A: Baseline parent/child region (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Source caption5 regions versus code11; C09. Actual results and availability: *[pending]*.

Earnings by four proximity categories
Empirical figure pending reviewed results.

Fig. 26 Replication of source FigureB.20: Earnings by four proximity categories. Men: Men (Index points; baseline 100). Women: Women (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Actual results and availability: *[pending]*.

Matched and future-treated control designs
Empirical figure pending reviewed results.

Fig. 27 Replication of source FigureB.21: Matched and future-treated control designs. A: Employment: men (Probability). B: Employment: women (Probability). C: Earnings: men (Index points; baseline 100). D: Earnings: women (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. C10 blocks future-treated window, cluster and earnings tail choices. Actual results and availability: *[pending]*.

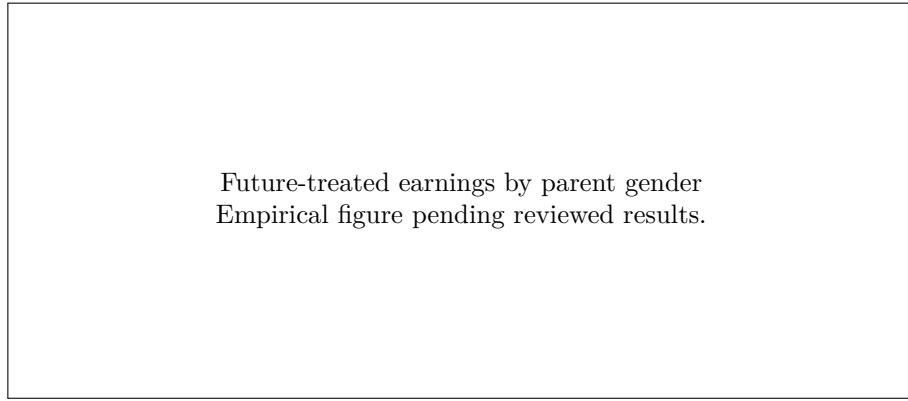


Fig. 28 Replication of source FigureB.22: Future-treated earnings by parent gender. A: Indexed earnings (Index points; baseline 100). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. C10. Actual results and availability: *[pending]*.

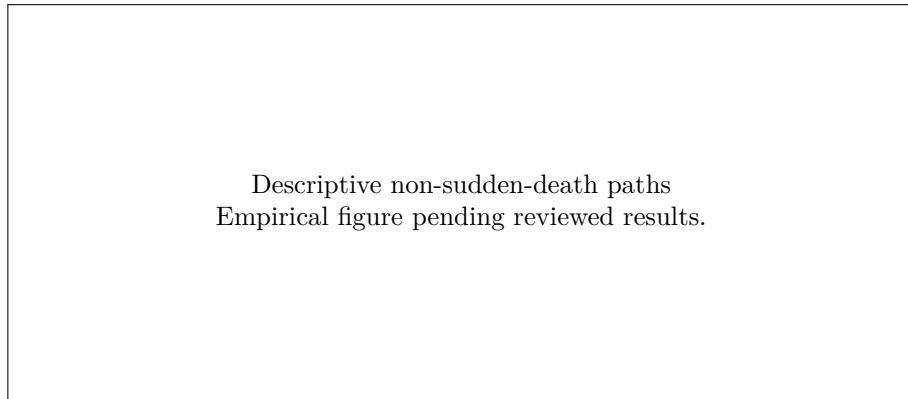


Fig. 29 Replication of source FigureB.23: Descriptive non-sudden-death paths. A: Employment (Percent of counterfactual mean). B: ATP conditional working (Percent of counterfactual mean). C: Raw earnings (Percent of counterfactual mean). D: Any mental prescriptions (Percent of counterfactual mean). Original specification and uncertainty are retained; unavailable targets are labelled without substitute estimates. Prediction denominator C04. Actual results and availability: *[pending]*.

TableB4 reports parental-wealth interactions: *[pending]*. The own-wealth, deceased-only and surviving-only prose variants retain separate missing-specification dispositions: *[pending]* *[pending]* *[pending]*. The inheritance interpretation is *[pending]*. Disputed units and wealth ownership cannot be resolved by scaling a coefficient to match the printed table, and an imprecise interaction cannot prove no bequest effect.

Table B4. Earnings response and parental baseline wealth

Binding: *[pending]*. Coefficients and standard errors remain paired within each cell. The source caption's 1,000 DKK versus program's 10,000 DKK scaling conflict must be resolved before a numerical unit is attached; a plausible-looking rescaling is not evidence of correspondence.

Source group	Interaction (SE)	Post effect (SE)	N	Control mean
Mother–men	—	—	—	—
Mother–women	—	—	—	—
Father–men	—	—	—	—
Father–women	—	—	—	—

The four source columns are transposed into rows for readability. Interaction is treatment $\times$ post $\times$ parental baseline wealth; post effect is treatment $\times$ post. Parent labels name the deceased parent and men/women name adult-child sex. Coefficients, standard errors, N and source control means are unchanged targets.

TableB5 presents occupational switching, firm changes and public-sector employment conditional on working: *[pending]*. The job-choice interpretation is *[pending]*. Order-dependent occupation coding remains unavailable if source chronology cannot be established; firm and sector results retain their own status. TableB6 completes the original display sequence with cause, parent age, adult age and period heterogeneity: *[pending]*. Printed age cutpoints and code-recomputed medians remain distinct source evidence until clarified.

Tables B5 and B6. Job choice and labor-response heterogeneity

B5 binding: *[pending]*. The source sex-specific coefficient, standard error and observation count have separate cells below. All job-choice quantities are conditional on working; an unavailable occupation chronology does not become a zero switching response.

Job-choice outcome	Men: coefficient (SE); N	Women:	Definition/status
		coefficient (SE); N	
Occupational switching	—	—	—
Firm change	—	—	—
Public-sector employment	—	—	—

B6 binding: *[pending]*. The four specifications are separate models by sex; every category coefficient, its standard error and the model N is reported. No new cross-category test is added. Unresolved printed versus code-generated age cutpoints remain visible.

Separate source model and category	Men: coefficient (SE); N	Women: coefficient (SE); N
Cause: heart, codes 24/25	—	—
Cause: stroke, code 26	—	—
Cause: respiratory, code 29	—	—
Cause: accident, codes 46/47/49	—	—

Separate source model and category	Men: coefficient (SE); N	Women: coefficient (SE); N
Parent age: lower source group	—	—
Parent age: upper source group	—	—
Adult age: lower source group	—	—
Adult age: upper source group	—	—
Period: 1985–1994	—	—
Period: 1995–2004	—	—
Period: 2005–2014	—	—

Discussion

The source’s sequence matters for interpretation. Labor outcomes establish the phenomenon to be explained; health and family-support outcomes then assess the compatibility of particular explanations with the observed response. Positive ATP contributions, conditional contributions and earnings need not move together. A decline in earnings with unchanged employment, for example, would describe a different labor adjustment from an employment decline. This distinction follows the original outcome definitions rather than adding a new test of labor-supply mechanisms.

The family evidence also has asymmetric implications. Childcare enrollment and spouse earnings can qualify an account centered only on the bereaved individual’s health, while surviving-parent proximity and illness can motivate an account involving family responsibilities. Neither set isolates time spent caring, emotional burden or employers’ responses. Wealth interactions concern the association of baseline parental assets with the response, not observed receipt of a particular inheritance. A coherent pattern across these pieces strengthens a bounded narrative; it does not transform them into an identified decomposition of the total effect.

The scientific synthesis is *[pending]*. It will read the actual labor outcome vector together with health, timing and family-support results, then qualify that account with inheritance, formation, spouse and job-choice evidence. Completion/partial/boundary labels describe coverage only. They cannot supply effect direction, magnitude, causal strength or agreement with the paper. If results differ across outcomes or subgroups, the discussion will preserve those differences and the intervals around them. If only some targets are available, claims are confined to that available scope.

Source discrepancies and missing inputs may prevent particular estimates, including shared-sample targets. Such a boundary neither confirms nor contradicts a published estimate. It identifies what cannot be faithfully determined from the materials at hand. Additional source clarification can be recorded through a traceable amendment; no scientific repair is pre-authorized here. Computational success, a compiled PDF or a complete conversion is not empirical replication.

The source’s international generalization discussion is retained as a contextual disposition: *[pending]*. No new country comparison tests it. The source institutional

context may help readers assess transportability, but the observed Danish evidence, if obtained, would not by itself demonstrate effects elsewhere or establish a universal lower bound.

Supplementary reconstruction methods

Linkage, history and distinct analytic populations

The first-parent-death construction precedes matching. Both parental identities, source population presence and the final cause classification are established before assigning the event year and adult eligibility. The introductory age distribution does not inherit the complete eleven-year labor-panel restriction. Likewise, the parental-age restriction used for some baseline displays is not imposed on a display whose source constructs it earlier. These ordering differences are part of the estimands' populations and cannot be harmonized simply to make sample sizes agree across figures.

The labor panel separates recorded employment from contribution intensity and earnings. Source winsorization, inflation and baseline indexing are applied at the stated stages and within the stated populations. The baseline death-type table pools both death groups for its winsorization step; indexed effects require the appropriate sex/subgroup baseline denominator. A shared variable label does not authorize reusing a denominator from another plot. The hospital, prescription, private-service and childcare outcomes retain their own coverage windows and linked populations rather than complete-case restricting every analysis to the intersection of all registers.

Matched comparisons and uncertainty

The matching audit establishes correspondence between journal cells and program histories before a matched sample can support source estimates. Matching distance, exact restrictions, neighbor choices and duplicate handling affect the comparison population. The registered unresolved choices are not routine tuning parameters. Once a source-faithful sample exists, treatment-by-event coefficients are estimated with the original fixed effects and individual-by-match clustering; source post-period summaries are reported only after their event-year convention is established. A confidence interval around a substituted model does not quantify uncertainty about the original target.

The alternative future-treated comparisons remain source robustness analyses, with their own cohort, window and uncertainty conventions. They neither replace the primary match automatically nor form a tournament from which the most persuasive path is selected. The complete event profiles, including pre-event periods, remain visible in their original displays. This replication adds no new joint pretrend test or criterion for choosing between statistically insignificant and significant versions.

Connecting health and family-support evidence

Service contacts, prescriptions and onset indicators are constructed separately before the source joint-timing quantities are assembled. A joint indicator requires the source definition of each component and its denominator; it is not obtained by multiplying

separately estimated effects. The hospital-count interaction remains a count interaction where the source uses one. Conditional shares require their actual qualifying population and cannot be filled when an event-year or denominator conflict remains unresolved.

Young-child status, surviving-parent illness, spouse eligibility and wealth each define a different comparison. Post-event illness classifications retain their selection limits. Spouse earnings use the spouse-specific match rather than inheriting the adult-child sample. Net parental assets are not renamed observed bequests, and a missing occupation-history ordering does not justify substituting an adjacent-year switch. These restrictions delimit the original science while leaving independently supported components reportable.

Supplementary displays and incomplete reconstruction

Figures B1–B23 retain the source sequence described above, with all panels supplied through their existing rendering interfaces. Each unavailable target carries its specific source-definition, input or execution disposition in place of an estimate. The main text can summarize a family of related results, but its supplementary display retains the original distinctions. Source prose-only robustness and share comparisons remain explicitly inventoried even when their exact implementation is unavailable. Neither supplementary placement nor a successful PDF build changes their evidential status.

Ethics, access and reproducibility

Only public sources and schema documentation were inspected. Confidential rows and empirical code execution are outside this stage. The source audit records the journal/supplement identities, hashes of supplied and sibling code, live retrieval dates, failed access and unresolved choices. The source-provenance record is copied unchanged. The original PDFs and programs are not redistributed in the World.

Every retained analysis has an Atom protocol, actual-result interface and narrative disposition. One Molecule contains all11 Atoms. Per-figure renderers accept only the registered plot-ready tables; synthetic complete, partial and missing-input checks occur outside the World and supply no manuscript results. Full registration/paper compilation and packaging belong to Transcriber and the host. There has been no separate scientific reviewer or independent acceptance.

References

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