Table S1. Care-related questionnaires in both datasets and the process of harmonisation.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **UK** |  | **Germany** |
| **Variables** | **Questionnaire**  | **Measures** |  | **Questionnaire**  | **Measures** |
| **Yes/no care** | “Is there anyone living with you who is sick, disabled or elderly whom you look after or give special help to?”“Do you provide some regular service or help for any sick, disabled or elderly person not living with you?”Response: Yes/No | Carers: answered yes to either of these questions in one or more waves between age 17-29Non-carers: No care in any wave between age 17-29 |  | “What is a typical day like for you? How many hours do you spend on the following activities on a typical weekday, Saturday, and Sunday - Care and support of persons in need of care?” Metric response: 0-24 hours per weekday1 | Carers: caring for one or more hours in one or more waves between age 17-29Non-carers: zero hour care in any wave between age 17-29 |
|  |  |  |  |  |  |
| **Duration of care** | Same as above | No care; care in one wave; care in two waves or more  |  | Same as above | No care; care in one wave; care in two waves or more |
|  |  |  |  |  |  |
| **Intensity of care** | “both those living with you and not living with you - in total, how many hours do you spend each week looking after or helping them”Nine category response: 0 - 4 hours/5 - 9 hours/10 - 19 hours/20 - 34 hours/35 - 49 hours/50 - 99 hours/100 or more hours or continuous care/Varies under 20 hours/Varies 20 hours or more2 | No Care; Regular Care (<10hours); Intensive Care (10+ hours) |  | Same as above | No Care; Regular Care (<10hours); Intensive Care (10+ hours) |

Note  1 The German analysis specifically only focused on informal caring on weekdays due to the Saturday and Sunday parts of this question not being ask in the waves 2010, 2014, 2016 and 2018. 2 Varies under 20 hours was coded as 10 hours

Table S2. Average marginal effect (AME) of the association between young adulthood care and degree qualification in the UK and Germany.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **UK (N=18312)** |  | **Germany (N=10725)** |
|  | **AME** | **95%CI** |  | **AME** | **95%CI** |
| Yes/no care |  |  |  |  |  |  |  |
|  No care | ref |  |  |  | ref |  |  |
|  Yes care | -1.52 | -1.66 | -1.39 |  | -0.90 | -1.23 | -0.58 |
| Age | 0.09 | 0.08 | 0.10 |  | 0.24 | 0.22 | 0.26 |
| Gender |  |  |  |  |  |  |  |
|  Men | ref |  |  |  | ref |  |  |
|  Women | 0.30 | 0.23 | 0.37 |  | 0.12 | 0.01 | 0.23 |
| Ethnicity |  |  |  |  |  |  |  |
|  White | ref |  |  |  | x | x | x |
|  Black | 0.19 | 0.06 | 0.32 |  | x | x | x |
|  Indian | 1.42 | 1.27 | 1.58 |  | x | x | x |
|  Pakistani | 0.72 | 0.56 | 0.88 |  | x | x | x |
|  Bangladeshi | 0.94 | 0.75 | 1.14 |  | x | x | x |
|  Asian/Other | 0.98 | 0.83 | 1.13 |  | x | x | x |
| Migration background |  |  |  |  |  |  |  |
|  No migration background | x | x | x |  | ref |  |  |
|  Yes migration background | x | x | x |  | 0.36 | 0.22 | 0.50 |
| Household net equivalence income  |  |  |  |  |  |  |  |
|  First quintile (lowest) | ref |  |  |  | ref |  |  |
|  Second quintile | 0.09 | -0.03 | 0.21 |  | -0.44 | -0.64 | -0.25 |
|  Third quintile | 0.21 | 0.10 | 0.33 |  | -0.46 | -0.66 | -0.27 |
|  Fourth quintile | 0.39 | 0.28 | 0.51 |  | -0.09 | -0.29 | 0.11 |
|  Fifth quintile (highest) | 0.95 | 0.83 | 1.06 |  | 0.31 | 0.11 | 0.50 |
| Parental educational attainment  |  |  |  |  |  |  |  |
|  No qualification | ref |  |  |  | ref |  |  |
|  Some qualification | 0.39 | 0.29 | 0.49 |  | 0.18 | -0.04 | 0.40 |
|  Lower than Degree | 0.71 | 0.58 | 0.84 |  | 0.63 | 0.43 | 0.83 |
|  Degree or higher | 1.15 | 0.99 | 1.31 |  | 1.47 | 1.26 | 1.69 |
| Parental occupational class |  |  |  |  |  |  |  |
|  Routine/Manual | ref |  |  |  | ref |  |  |
|  Intermediate | 0.49 | 0.37 | 0.61 |  | 0.58 | 0.37 | 0.79 |
|  Managerial/Professional | 0.73 | 0.64 | 0.82 |  | 1.17 | 0.96 | 1.38 |
|  Not working | -0.09 | -0.22 | 0.03 |  | 1.58 | 1.31 | 1.86 |
| Number of waves participated | 0.15 | 0.13 | 0.17 |  | 0.32 | 0.28 | 0.50 |

Note: Those younger than age 21 (when last interviewed) or that had already achieved a university degree before or at the wave of the first provision of informal care were excluded from the analysis. Each caring characteristic was tested in separate logistic regression models. All the analyses were imputed.

Table S3. Average marginal effect (AME) of the association between young adulthood care and degree qualification in the UK and Germany among age 23+ and age 25+ separately.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **UK** **(Age 23+, N=14951)1** | **UK** **(Age 25+, N=11806)2** | **Germany (Age 23+, N=8754)1** | **Germany (Age 25+, N=6992)2** |
|  | **AME** | **95% CI** | **AME** | **95% CI** | **AME** | **95% CI** | **AME** | **95% CI** |
| Yes/no care |  |  |  |  |  |  |  |  |  |  |  |  |
|  No care | ref |  |  | ref |  |  | ref |  |  | ref |  |  |
|  Yes | -1.64 | -1.79 | -1.49 | -1.84  | -2.02 | -1.67 | -0.89 | -1.22 | -0.56 | -0.84 | -1.20  | -0.48 |
| Care intensity  |  |  |  |  |  |  |  |  |  |  |  |  |
|  No care | ref |  |  | ref |  |  | ref |  |  | ref |  |  |
|  Regular | -1.47 | -1.64 | -1.29 | -1.64 | -1.85  | -1.43 | -0.93 | -1.36 | -0.51 | -0.93 | -1.40  | -0.46 |
|  Intensive | -2.02 | -2.29 | -1.74 | -2.28 | -2.62 | -1.94 | -0.83 | -1.35 | -0.31 | -0.71 | -1.25  | -0.17 |
| Care duration |  |  |  |  |  |  |  |  |  |  |  |  |
|  No care | ref |  |  | ref |  |  | ref |  |  | ref |  |  |
|  1 Wave | -1.88 | -2.10 | -1.66 | -2.09 | -2.36  | -1.83 | -0.71 | -1.07 | -0.35 | -0.65 | -1.04  | -0.26 |
|  2 Waves or more | -1.43 | -1.62 | -1.23 | -1.63 | -1.86  | -1.40 | -1.65 | -2.51 | -0.79 | -1.58 | -2.45  | -0.70 |

Note: 1 Those younger than age 23 (when last interviewed) were excluded from the analysis.

2 Those younger than age 25 (when last interviewed) were excluded from the analysis.

Each caring characteristic was tested in separate logistic regression models. All models adjusted for age, gender, ethnicity (UK only), migration status (Germany only), household income, parental occupational class, parental education, and number of waves participated between age 17 and 29. All the analyses were imputed.

Table S4. Hazard Ratio (HR) of the association between young adulthood care and entering employment**.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **UK** **Age>=23** **N=5534** |  | **GermanyAge>=23N=2574** |
|  | **HR** | **95%CI** |  | **HR** | **95%CI** |
| Yes/no care |  |  |  |  |  |  |  |
|  No care | ref |  |  |  | ref |  |  |
|  Yes care | 0.89 | 0.83 | 0.97 |  | 0.79 | 0.65 | 0.96 |
| Gender |  |  |  |  |  |  |  |
|  Men | ref |  |  |  | ref |  |  |
|  Women | 0.91 | 0.85 | 0.97 |  | 0.81 | 0.74 | 0.90 |
| Ethnicity |  |  |  |  |  |  |  |
|  White | ref |  |  |  | x | x | x |
|  Black | 0.97 | 0.86 | 1.08 |  | x | x | x |
|  Indian | 1.05 | 0.90 | 1.22 |  | x | x | x |
|  Pakistani | 0.86 | 0.75 | 0.99 |  | x | x | x |
|  Bangladeshi | 0.94 | 0.79 | 1.12 |  | x | x | x |
|  Asian/Other | 0.84 | 0.72 | 0.98 |  | x | x | x |
| Migration background |  |  |  |  |  |  |  |
|  No migration background | x | x | x |  | ref |  |  |
|  Yes migration background | x | x | x |  | 0.85 | 0.76 | 0.96 |
| Household net equivalence income  |  |  |  |  |  |  |  |
|  First quintile (lowest) | ref |  |  |  | ref |  |  |
|  Second quintile | 1.07 | 0.97 | 1.17 |  | 1.10 | 0.96 | 1.26 |
|  Third quintile | 1.18 | 1.06 | 1.30 |  | 1.15 | 0.99 | 1.33 |
|  Fourth quintile | 1.21 | 1.08 | 1.35 |  | 1.08 | 0.92 | 1.27 |
|  Fifth quintile (highest) | 1.14 | 1.003 | 1.29 |  | 0.96 | 0.81 | 1.14 |
| Parental educational attainment  |  |  |  |  |  |  |  |
|  No qualification | ref |  |  |  | ref |  |  |
|  Some qualification | 1.13 | 1.04 | 1.24 |  | 1.08 | 0.72 | 1.63 |
|  Lower than Degree | 1.12 | 1.004 | 1.26 |  | 1.14 | 1.001 | 1.31 |
|  Degree or higher | 0.95 | 0.84 | 1.07 |  | 0.96 | 0.85 | 1.09 |
| Parental occupational class |  |  |  |  |  |  |  |
|  Routine/Manual | ref |  |  |  | ref |  |  |
|  Intermediate | 1.08 | 0.96 | 1.20 |  | 1.03 | 0.89 | 1.19 |
|  Managerial/Professional | 1.05 | 0.96 | 1.15 |  | 1.03 | 0.90 | 1.19 |
|  Not working | 0.80 | 0.72 | 0.89 |  | 0.78 | 0.57 | 1.05 |
| Degree |  |  |  |  |  |  |  |
|  Without a degree | ref |  |  |  | ref |  |  |
|  With a degree | 1.24 | 1.15 | 1.34 |  | 1.16 | 1.04 | 1.30 |

Sample are those who were not in employment at baseline (older than age 23).Model further adjusted for year of birth to account for the period effect. This variable has 20+ categories, and thus was not shown in table. All the analyses were weighted and imputed.

Table S5. Interactions between care and gender for degree and employment outcomes in the UK and Germany

|  |  |  |  |
| --- | --- | --- | --- |
|  | **UK** |  | **Germany** |
|  | **Degree1** | **Employment2** | **Unemployment2** |  | **Degree1** | **Employment2** | **Unemployment2** |
|  | OR[95% CI] | HR[95% CI] | HR[95% CI] |  | OR[95% CI] | HR[95% CI] | HR[95% CI] |
| **Yes/no care**  |  |  |  |  |  |  |  |
| ***Yes/no care*** |  |  |  |  |  |  |  |
| *Yes care* | **0.21****[0.17 0.27]** | 0.97 [0.86  1.09] | 1.13 [0.97   1.33] |  | **0.55[0.34 0.87]** | 0.83 [0.63   1.10] | 1.30 [0.94   1.80] |
| ***Gender*** |  |  |  |  |  |  |  |
| *Women* | **1.35****[1.26 1.45]** | 0.94[0.87 1.02] | **0.75****[0.67 0.84]** |  | **1.14[1.02 1.28]** | **0.82 [0.74   0.90]** | 0.94[0.83 1.08] |
| ***Care#Gender*** |  |  |  |  |  |  |  |
| *Care#Women* | 1.03[0.78 1.36] | 0.87[0.74   1.01] | **1.27 [1.03   1.57]** |  | 0.58[0.31 1.11] | 0.91 [0.62   1.33] | 0.98 [0.62   1.53] |

Note 1 Among age 21 or older only.
2Among age 23 or older only.
Logistic models for degree outcome adjusted for age, gender, ethnicity (UK only), migration status (Germany only), household income, parental occupational class, parental education, and number of waves participated between age 17 and 29. Cox models for the three employment outcomes adjusted for gender, ethnicity (UK only), migration status (Germany only), household income, parental occupational class, parental education, and participants’ own highest educational qualifications. Age was used as the timescale to account for age effects. All the analyses were imputed. Interaction terms with p<0.05 are shown in bold.

Table S6. Point-Estimators of the weighted degree and employment outcomes in the UK and Germany

|  |  |  |  |
| --- | --- | --- | --- |
|  | **UK** |  | **Germany** |
|  | **Degree1** | **Employment2** | **Unemployment2** |  | **Degree1** | **Employment2** | **Unemployment2** |
|  | AME | HR | HR |  | AME | HR | HR |
| **Yes/no care**  |  |  |  |  |  |  |  |
|  No Care | ref | ref | ref |  | ref | ref | ref |
|  Yes care | -1.66 | 0.88 | 1.33 |  | -1.44 | 0.96 | 0.95 |
| **Care intensity** |  |  |  |  |  |  |  |
|  No Care | ref | ref | ref |  | ref | ref | ref |
|  Regular care | -1.47 | 0.98 | 1.21 |  | -1.30 | 0.85 | 1.05 |
|  Intensive Care | -2.21 | 0.65 | 1.65 |  | -1.89 | 1.10 | 0.81 |
| **Care duration** |  |  |  |  |  |  |  |
|  No Care | ref | ref | ref |  | ref | ref | ref |
|  1 wave care | -1.74 | 0.92 | 1.29 |  | -1.28 | 1.08 | 0.78 |
|  2 waves or more care | -1.57 | 0.83 | 1.36 |  | -1.80 | 0.73 | 1.34 |

Note 1 Among age 21 or older only.
2Among age 23 or older only.
Logistic models for degree outcome adjusted for age, gender, ethnicity (UK only), migration status (Germany only), household income, parental occupational class, parental education, and number of waves participated between age 17 and 29. Cox models for the three employment outcomes adjusted for gender, ethnicity (UK only), migration status (Germany only), household income, parental occupational class, parental education, and participants’ own highest educational qualifications. Age was used as the timescale to account for age effects. All the analyses were imputed.