**Appendix Table 1. Mortality, 1986-2014: Numbers of Death by Underlying Cause (from cohort of 41,836)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Cause** | **Number of Deaths** | **Cause** | **Number of Deaths** |
|  |  |  |  |
| Breast Cancer | 885 | Other CVD | 2,786 |
| Lung Cancer | 1,282 | COPD | 1,462 |
| Ovarian Cancer | 401 | Other Respiratory Diseases | 1,200 |
| Colorectal Cancer | 797 | Injuries and Poisoning | 731 |
| Other Cancer | 3,155 | Other Causes | 6,651 |
| Coronary Heart Disease | 4,948 |  |  |
| Stroke | 2,174 | **TOTAL** | **26,472** |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Appendix Table 2. Availability of key variables in federal census data** | | | | | | | | | |
| **Variables** | **1920** | **1930** | **1940** | **1950** |  | **1920** | **1930** | **1940** | **1950** |
| *Geographic identifiers* | | |  |  | *Education* |  |  |  |  |
| Municipality; County; State | X | X | X | X | Attended School | X | X | X | X |
| Street address | X | X | X | X | Literacy | X | X |  |  |
| *Individual identifiers and demographics* | | | |  | Highest Grade | | | X | X |
| First and last name | X | X | X | X | *Work and employment* | | |  |  |
| Relation to household head | X | X | X | X | Class of worker | X | X | X | X |
| Sex | X | X | X | X | Occupation | X | X | X | X |
| Race | X | X | X | X | Industry | X | X | X | X |
| Age | X | X | X | X | Unemployment | | X | X | X |
| Marital Status | X | X | X | X | Income |  |  | X | X |
| *Household characteristics* | | |  |  | Hours worked |  |  | X | X |
| Owned or Rented | X | X | X | X | *Other questions* |  |  |  |  |
| Free / Mortgaged | X |  |  | X | Radio ownership |  | X |  |  |
| Home value or rent | | X | X |  | Veteran status |  | X | X | X |
| Family size | X | X | X | X | Inter-state migrant | X | X | X | X |
| Is household a farm | X | X | X | X |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Appendix Table 3. Projected IWHS cohort members linked to each census** | | | | | | |
| Birth cohort | N in IWHS | 1920 | 1930 | 1940 | 1950 | Number linked to all censuses |
| 1916-31 Dec 1919 | 9,461 | 8,042 | 8,042 | 8,042 | 8,042 | 5,567 |
| 1920-31 Dec 1924 | 14,235 | . | 12,100 | 12,100 | 12,100 | 8,377 |
| 1925-31 Mar 1930 | 15,918 | . | 13,530 | 13,530 | 13,530 | 12,210 |
| 1 Apr 1930-1931 | 2,222 | . |  | 1,888 | 1,888 | 1,793 |
| Total | 41,836 | 8,042 | 33,672 | 35,560 | 35,560 | 27,947 |

**Appendix Table 4. Characteristics of full IWHS cohort and early-life matches**

|  |  | | **Not matched** | **Matched to 1930** | **p-value** |
| --- | --- | --- | --- | --- | --- |
|  |  | | N=31461 | N=10375 |  |
| BMI |  | | 26.07 (4.95) | 26.30 (4.94) | <0.001 |
|  |  | |  |  |  |
| Height (cm) |  | | 162.86 (6.35) | 162.86 (6.39) | 0.92 |
|  |  | |  |  |  |
| Age |  | | 61.61 (4.28) | 62.03 (4.11) | <0.001 |
|  |  | |  |  |  |
| Self rated health | Excellent | | 7572 (24.4%) | 2281 (22.3%) | <0.001 |
|  | Good | | 18795 (60.6%) | 6386 (62.3%) |  |
|  | Fair | | 4139 (13.3%) | 1426 (13.9%) |  |
|  | Poor | | 510 ( 1.6%) | 153 ( 1.5%) |  |
|  |  | |  |  |  |
| Residence in 1986 | Farm | | 5789 (18.6%) | 2158 (20.9%) | <0.001 |
|  | Rural, non-farm | | 2330 ( 7.5%) | 764 ( 7.4%) |  |
|  | Town < 1,000 | | 3361 (10.8%) | 1238 (12.0%) |  |
|  | Town 1,000-2,499 | | 3298 (10.6%) | 1191 (11.6%) |  |
|  | Town 2,500-10,000 | | 5407 (17.3%) | 1787 (17.3%) |  |
|  | Town or city, 10,000+ | | 10991 (35.3%) | 3172 (30.8%) |  |
|  |  | |  |  |  |
| Education | Grade school | | 2649 ( 8.4%) | 1114 (10.7%) | <0.001 |
|  | Attended high school | | 3313 (10.5%) | 1087 (10.5%) |  |
|  | Graduated high school | | 12952 (41.2%) | 4445 (42.8%) |  |
|  | Vocational education | | 3158 (10.0%) | 1040 (10.0%) |  |
|  | Attended college | | 5195 (16.5%) | 1585 (15.3%) |  |
|  | College graduate | | 2899 ( 9.2%) | 795 ( 7.7%) |  |
|  | Graduate school | | 1200 ( 3.8%) | 290 ( 2.8%) |  |
|  | Missing | | 95 ( 0.3%) | 19 ( 0.2%) |  |
|  |  | |  |  |  |
| Race | White | | 30730 (99.1%) | 10171 (99.3%) | 0.017 |
|  | Black | | 111 ( 0.4%) | 27 ( 0.3%) |  |
|  | Hispanic | | 97 ( 0.3%) | 20 ( 0.2%) |  |
|  | American Indian | | 41 ( 0.1%) | 19 ( 0.2%) |  |
|  | Asian or Pacific Islander | | 31 ( 0.1%) | 3 (<1%) |  |
|  |  | |  |  |  |
| Marital status | Never married | | 1023 ( 3.3%) | 1 (<1%) | <0.001 |
|  | Currently married | | 23655 (75.2%) | 8150 (78.6%) |  |
|  | Separated/divorced | | 1435 ( 4.6%) | 428 ( 4.1%) |  |
|  | Widowed | | 5061 (16.1%) | 1735 (16.7%) |  |
|  | Missing | | 287 ( 0.9%) | 61 ( 0.6%) |  |
|  |  | |  |  |  |
| Age at marriage |  | | 21.23 (3.88) | 21.31 (3.95) | 0.057 |
|  |  | |  |  |  |
| Live births |  | | 3.05 (2.09) | 3.16 (2.07) | <0.001 |
|  | | |  |  |  |
| Usual occupation in adulthood | | |  |  |  |
| Homemaker | |  | 13042 (41.5%) | 4578 (44.1%) | <0.001 |
| Professional, manager | |  | 4723 (15.0%) | 1311 (12.6%) | <0.001 |
| Clerical, sales, technician | |  | 8770 (27.9%) | 2836 (27.3%) | 0.29 |
| Craft, service, laborer | |  | 5476 (17.4%) | 1842 (17.8%) | 0.42 |
| Farmer, farm worker | |  | 1360 ( 4.3%) | 572 ( 5.5%) | <0.001 |
| Never worked | |  | 34 ( 0.1%) | 9 ( 0.1%) | 0.56 |
| Other usual employment | |  | 1633 ( 5.2%) | 540 ( 5.2%) | 0.95 |
|  | |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Appendix Table 5. Childhood and 1985 baseline characteristics by migration status** | | | | |
|  | Farm stayer | Farm to rural | Farm to town | Farm to city |
|  | N=1666 | N=2023 | N=1064 | N=1218 |
| Father farmer | 0.90 (0.3) | 0.85 (0.4) | 0.88 (0.3) | 0.83 (0.4) |
| Father white collar | 0.00 (0.1) | 0.01 (0.1) | 0.01 (0.1) | 0.01 (0.1) |
| Father laborer | 0.00 (0.1) | 0.01 (0.1) | 0.01 (0.1) | 0.01 (0.1) |
| Father farm laborer | 0.03 (0.2) | 0.05 (0.2) | 0.04 (0.2) | 0.06 (0.2) |
| Father semi/skilled trade | 0.01 (0.1) | 0.01 (0.1) | 0.01 (0.1) | 0.02 (0.1) |
| Owned home | 0.40 (0.5) | 0.38 (0.5) | 0.38 (0.5) | 0.37 (0.5) |
| Owned radio | 0.49 (0.5) | 0.49 (0.5) | 0.48 (0.5) | 0.49 (0.5) |
| Father is veteran | 0.14 (0.3) | 0.13 (0.3) | 0.13 (0.3) | 0.14 (0.4) |
| House value | Not enumerated on farms | | | |
| Monthly contract rent, 1930 | Not enumerated on farms | | | |
| BMI in 1985 | 26.68 (4.9) | 26.73 (5.1) | 26.13 (4.7) | 25.75 (4.9) |
| Height (cm) in 1985 | 162.99 (6.5) | 163.11 (6.3) | 163.19 (6.5) | 162.56 (6.1) |
| Education reported in 1985 |  |  |  |  |
| Grade school | 309 (18.5%) | 327 (16.2%) | 168 (15.8%) | 95 (7.8%) |
| Attended High School | 121 (7.3%) | 213 (10.5%) | 107 (10.1%) | 105 (8.6%) |
| High School | 691 (41.5%) | 828 (40.9%) | 437 (41.1%) | 476 (39.1%) |
| Vocational education | 132 (7.9%) | 199 (9.8%) | 101 (9.5%) | 168 (13.8%) |
| Some college | 275 (16.5%) | 278 (13.7%) | 174 (16.4%) | 200 (16.4%) |
| College graduate | 108 (6.5%) | 132 (6.5%) | 62 (5.8%) | 119 (9.8%) |
| Graduate school | 29 (1.7%) | 38 (1.9%) | 15 (1.4%) | 53 (4.4%) |
| Missing | 1 (0.1%) | 8 (0.4%) | 0 (0.0%) | 2 (0.2%) |
| Self rated health in 1985 |  |  |  |  |
| Poor | 12 (0.7%) | 31 (1.6%) | 17 (1.6%) | 17 (1.4%) |
| Fair | 190 (11.6%) | 309 (15.4%) | 159 (15.2%) | 139 (11.5%) |
| Good | 1044 (63.8%) | 1290 (64.5%) | 632 (60.4%) | 727 (60.2%) |
| Excellent | 391 (23.9%) | 370 (18.5%) | 238 (22.8%) | 324 (26.8%) |
| Age at study entry | 62.10 (4.0) | 62.90 (4.1) | 62.57 (4.2) | 62.18 (4.0) |
| Marital status in 1985 |  |  |  |  |
| Currently married | 1484 (89.1%) | 1563 (77.3%) | 775 (72.8%) | 908 (74.5%) |
| Separated/divorced | 8 (0.5%) | 61 (3.0%) | 48 (4.5%) | 76 (6.2%) |
| Widowed | 168 (10.1%) | 382 (18.9%) | 233 (21.9%) | 230 (18.9%) |
| Missing | 6 (0.4%) | 17 (0.8%) | 8 (0.8%) | 4 (0.3%) |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Appendix Table 5 (continued)** |  |  |  |  |
|  | NF Rural to Farm | NF Rural stayer | NF Rural to Town | NF Rural to City |
|  | N=247 | N=665 | N=310 | N=547 |
| Father farmer | 0.04 (0.2) | 0.03 (0.2) | 0.02 (0.1) | 0.01 (0.1) |
| Father white collar | 0.24 (0.4) | 0.21 (0.4) | 0.27 (0.4) | 0.26 (0.4) |
| Father laborer | 0.14 (0.3) | 0.17 (0.4) | 0.16 (0.4) | 0.14 (0.3) |
| Father farm laborer | 0.09 (0.3) | 0.08 (0.3) | 0.08 (0.3) | 0.07 (0.3) |
| Father semi/skilled trade | 0.28 (0.4) | 0.29 (0.5) | 0.23 (0.4) | 0.28 (0.4) |
| Owned home | 0.46 (0.5) | 0.43 (0.5) | 0.42 (0.5) | 0.42 (0.5) |
| Owned radio | 0.49 (0.5) | 0.46 (0.5) | 0.39 (0.5) | 0.45 (0.5) |
| Father is veteran | 0.19 (0.4) | 0.22 (0.4) | 0.26 (0.4) | 0.22 (0.4) |
| House value | 2897.42 (1850.3) | 2327.51 (1958.2) | 2636.50 (2045.6) | 2988.83 (2652.3) |
| Monthly contract rent, 1930 | 13.59 (10.2) | 14.03 (6.7) | 13.76 (10.7) | 14.39 (9.3) |
| BMI in 1985 | 26.48 (4.6) | 26.28 (4.8) | 25.88 (4.7) | 25.85 (4.9) |
| Height (cm) in 1985 | 163.62 (7.2) | 162.83 (6.5) | 162.81 (6.2) | 162.54 (6.2) |
| Education reported in 1985 |  |  |  |  |
| Grade school | 14 (5.7%) | 45 (6.8%) | 21 (6.8%) | 16 (2.9%) |
| Attended High School | 14 (5.7%) | 79 (11.9%) | 30 (9.7%) | 54 (9.9%) |
| High School | 114 (46.2%) | 313 (47.1%) | 129 (41.6%) | 233 (42.6%) |
| Vocational education | 20 (8.1%) | 76 (11.4%) | 39 (12.6%) | 78 (14.3%) |
| Some college | 49 (19.8%) | 89 (13.4%) | 55 (17.7%) | 85 (15.5%) |
| College graduate | 28 (11.3%) | 47 (7.1%) | 24 (7.7%) | 52 (9.5%) |
| Graduate school | 8 (3.2%) | 14 (2.1%) | 10 (3.2%) | 28 (5.1%) |
| Missing | 0 (0.0%) | 2 (0.3%) | 2 (0.6%) | 1 (0.2%) |
| Self rated health in 1985 |  |  |  |  |
| Poor | 5 (2.0%) | 11 (1.7%) | 3 (1.0%) | 7 (1.3%) |
| Fair | 32 (13.0%) | 107 (16.3%) | 38 (12.4%) | 69 (12.7%) |
| Good | 160 (65.0%) | 405 (61.6%) | 191 (62.4%) | 340 (62.6%) |
| Excellent | 49 (19.9%) | 134 (20.4%) | 74 (24.2%) | 127 (23.4%) |
| Age at study entry | 61.54 (4.2) | 62.43 (4.2) | 62.38 (4.1) | 62.25 (4.2) |
| Marital status in 1985 |  |  |  |  |
| Currently married | 226 (91.5%) | 508 (76.4%) | 224 (72.3%) | 411 (75.1%) |
| Separated/divorced | 0 (0.0%) | 31 (4.7%) | 25 (8.1%) | 33 (6.0%) |
| Widowed | 21 (8.5%) | 123 (18.5%) | 60 (19.4%) | 100 (18.3%) |
| Missing | 0 (0.0%) | 3 (0.5%) | 0 (0.0%) | 3 (0.5%) |
|  |  |  |  |  |

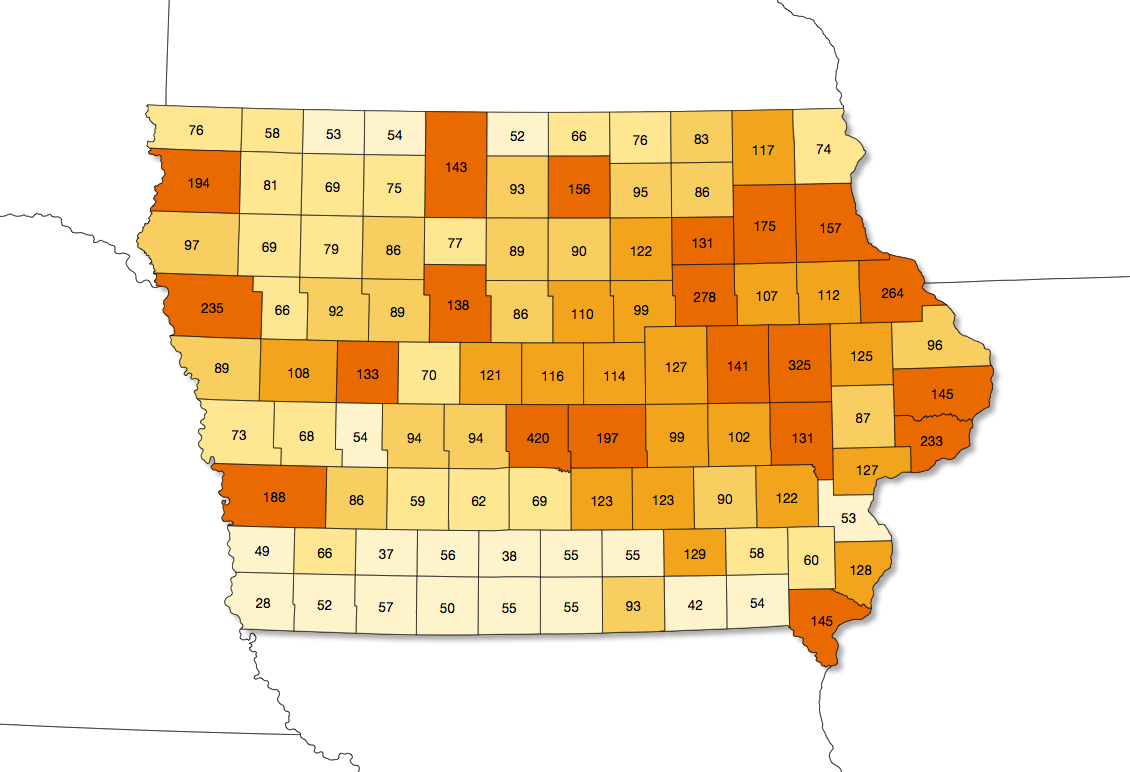
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Appendix Table 5 (continued)** |  |  |  |  |
|  | Urban to Farm | Urban to NF Rural | Urban to town | Urban to city |
|  | N=245 | N=505 | N=413 | N=1407 |
| Father farmer | 0.03 (0.2) | 0.01 (0.1) | 0.02 (0.2) | 0.01 (0.1) |
| Father white collar | 0.24 (0.4) | 0.21 (0.4) | 0.22 (0.4) | 0.25 (0.4) |
| Father laborer | 0.15 (0.4) | 0.14 (0.3) | 0.13 (0.3) | 0.11 (0.3) |
| Father farm laborer | 0.02 (0.2) | 0.02 (0.1) | 0.02 (0.2) | 0.01 (0.1) |
| Father semi/skilled trade | 0.34 (0.5) | 0.36 (0.5) | 0.35 (0.5) | 0.34 (0.5) |
| Owned home | 0.50 (0.5) | 0.46 (0.5) | 0.42 (0.5) | 0.53 (0.5) |
| Owned radio | 0.54 (0.5) | 0.51 (0.5) | 0.49 (0.5) | 0.51 (0.5) |
| Father is veteran | 0.27 (0.4) | 0.25 (0.4) | 0.23 (0.4) | 0.26 (0.4) |
| House value | 3721.60 (3052.5) | 3560.97 (3186.8) | 3786.37 (4379.4) | 4124.01 (4212.6) |
| Monthly contract rent, 1930 | 21.39 (10.6) | 22.01 (12.5) | 21.29 (12.7) | 23.53 (14.7) |
| BMI in 1985 | 27.54 (5.5) | 26.56 (5.2) | 26.06 (5.2) | 25.83 (4.9) |
| Height (cm) in 1985 | 162.81 (6.5) | 162.79 (6.5) | 162.72 (6.8) | 162.44 (6.3) |
| Education reported in 1985 |  |  |  |  |
| Grade school | 14 (5.7%) | 30 (5.9%) | 14 (3.4%) | 43 (3.1%) |
| Attended High School | 27 (11.0%) | 84 (16.6%) | 55 (13.3%) | 189 (13.4%) |
| High School | 130 (53.1%) | 230 (45.5%) | 211 (51.1%) | 628 (44.6%) |
| Vocational education | 21 (8.6%) | 43 (8.5%) | 25 (6.1%) | 135 (9.6%) |
| Some college | 33 (13.5%) | 62 (12.3%) | 55 (13.3%) | 222 (15.8%) |
| College graduate | 14 (5.7%) | 46 (9.1%) | 39 (9.4%) | 123 (8.7%) |
| Graduate school | 6 (2.4%) | 10 (2.0%) | 13 (3.1%) | 65 (4.6%) |
| Missing | 0 (0.0%) | 0 (0.0%) | 1 (0.2%) | 2 (0.1%) |
| Self rated health in 1985 |  |  |  |  |
| Poor | 3 (1.3%) | 10 (2.0%) | 11 (2.7%) | 25 (1.8%) |
| Fair | 35 (14.6%) | 82 (16.4%) | 72 (17.6%) | 184 (13.2%) |
| Good | 154 (64.2%) | 307 (61.3%) | 241 (59.1%) | 856 (61.4%) |
| Excellent | 48 (20.0%) | 102 (20.4%) | 84 (20.6%) | 330 (23.7%) |
| Age at study entry | 61.95 (4.1) | 62.19 (4.0) | 62.66 (4.0) | 62.62 (4.1) |
| Marital status in 1985 |  |  |  |  |
| Currently married | 226 (92.2%) | 397 (78.6%) | 307 (74.3%) | 1080 (76.8%) |
| Separated/divorced | 1 (0.4%) | 18 (3.6%) | 28 (6.8%) | 98 (7.0%) |
| Widowed | 18 (7.3%) | 83 (16.4%) | 75 (18.2%) | 224 (15.9%) |
| Missing | 0 (0.0%) | 7 (1.4%) | 3 (0.7%) | 5 (0.4%) |

| **Appendix Table 6.**  **All-cause mortality** | Migration only | 1930 characteristics | 1930 and Migration |
| --- | --- | --- | --- |
|  | b/t | b/t | b/t |
| Stayed on farm | 1.00 |  | 1.00 |
| (Baseline) |  |  |  |
| Farm to non-farm rural | 1.18 |  | 1.17 |
|  | 3.73 |  | 3.66 |
| Farm to small town | 1.06 |  | 1.06 |
|  | 1.15 |  | 1.11 |
| Farm to city (10k+) | 1.10 |  | 1.09 |
|  | 1.89 |  | 1.79 |
| Non-farm rural to farm | 1.03 |  | 1.02 |
|  | 0.28 |  | 0.22 |
| Stayed non-farm rural | 1.34 |  | 1.31 |
|  | 4.93 |  | 4.08 |
| Non-farm rural to small town | 1.20 |  | 1.18 |
|  | 2.25 |  | 1.94 |
| Non-farm rural to city | 1.33 |  | 1.31 |
|  | 4.48 |  | 3.80 |
| Urban (2500+) to Farm | 1.15 |  | 1.13 |
|  | 1.52 |  | 1.30 |
| Urban to non-farm rural | 1.34 |  | 1.31 |
|  | 4.51 |  | 3.78 |
| Urban to small town | 1.58 |  | 1.55 |
|  | 6.75 |  | 5.92 |
| Urban to city | 1.28 |  | 1.27 |
|  | 5.28 |  | 4.26 |
| Age in 1985 | 1.12 | 1.12 | 1.12 |
|  | 35.60 | 35.82 | 35.26 |
| Black |  | 1.56 | 1.67 |
|  |  | 1.91 | 2.16 |
| Father farmer |  | 1.00 | 1.00 |
|  |  |  |  |
| Father white collar |  | 0.97 | 0.97 |
|  |  | -0.49 | -0.64 |
| Father laborer |  | 0.99 | 0.98 |
|  |  | -0.21 | -0.35 |
| Father skilled / semi-skilled |  | 1.09 | 1.08 |
|  |  | 1.81 | 1.51 |
| Father farm laborer |  | 1.09 | 1.08 |
|  |  | 1.31 | 1.21 |
| Rented home |  | 1.08 | 1.07 |
|  |  | 2.78 | 2.45 |
| Both parents present |  | 1.00 | 1.00 |
|  |  |  |  |
| Father only |  | 1.21 | 1.19 |
|  |  | 1.67 | 1.46 |
| Mother only |  | 1.29 | 1.28 |
|  |  | 3.28 | 3.15 |
| Living without parents |  | 0.87 | 0.88 |
|  |  | -1.22 | -1.05 |
| Mother working |  | 0.93 | 0.93 |
|  |  | -0.96 | -0.95 |
| Number of foreign-born parents | | 0.98 | 0.98 |
|  |  | -0.69 | -0.79 |
| Farm residence (1930) |  | 1.00 |  |
|  |  |  |  |
| City of 100,000 + (Des Moines) | | 1.20 |  |
|  |  | 2.41 |  |
| City of 25-100,000 |  | 1.18 |  |
|  |  | 3.14 |  |
| Suburb of city |  | 1.14 |  |
|  |  | 1.14 |  |
| Town of 2,500 to 25,000 |  | 1.22 |  |
|  |  | 3.93 |  |
| Non-farm rural |  | 1.13 |  |
|  |  | 2.77 |  |
| N | 10310 | 10375 | 10310 |
| chi2 | 1382.47 | 1390.94 | 1413.13 |
| Log likelihood | -54241.17 | -54671.36 | -54225.84 |

**Appendix Table 7. Cause-specific mortality**

|  | Cancer | | Cardio and respiratory | |
| --- | --- | --- | --- | --- |
|  | b/t | b/t | b/t | b/t |
| Age in 1985 | 1.05 | 1.05 | 1.15 | 1.15 |
|  | 8.44 | 7.85 | 30.04 | 29.86 |
| Black |  | 1.7 |  | 1.57 |
|  |  | 1.17 |  | 1.27 |
| Father farmer |  | 1.00 |  | 1.00 |
|  |  |  |  |  |
| Father white collar |  | 1.05 |  | 0.92 |
|  |  | 0.48 |  | -1.04 |
| Father laborer |  | 1.04 |  | 0.93 |
|  |  | 0.31 |  | -0.82 |
| Father skilled / semi-skilled |  | 1.1 |  | 1.12 |
|  |  | 1 |  | 1.59 |
| Father farm laborer |  | 1.05 |  | 1.07 |
|  |  | 0.38 |  | 0.74 |
| Rented home |  | 0.95 |  | 1.11 |
|  |  | -0.89 |  | 2.68 |
| Both parents present |  | 1.00 |  | 1.00 |
|  |  |  |  |  |
| Father only |  | 1.12 |  | 1.25 |
|  |  | 0.48 |  | 1.37 |
| Mother only |  | 1.24 |  | 1.34 |
|  |  | 1.33 |  | 2.69 |
| Living without parents |  | 1.17 |  | 0.63 |
|  |  | 0.69 |  | -2.39 |
| Mother working |  | 0.96 |  | 0.9 |
|  |  | -0.3 |  | -1.05 |
| Number of foreign-born parents | | 0.99 |  | 0.91 |
|  |  | -0.19 |  | -2.36 |
| Stayed on farm |  | 1.00 |  | 1.00 |
| (Baseline) |  |  |  |  |
| Farm to non-farm rural |  | 1.22 |  | 1.13 |
|  |  | 2.34 |  | 1.92 |
| Farm to small town |  | 0.97 |  | 1.07 |
|  |  | -0.29 |  | 0.87 |
| Farm to city (10k+) |  | 1.06 |  | 1.09 |
|  |  | 0.6 |  | 1.18 |
| Non-farm rural to farm |  | 0.8 |  | 1.03 |
|  |  | -1.08 |  | 0.19 |
| Stayed non-farm rural |  | 1.26 |  | 1.33 |
|  |  | 1.81 |  | 2.96 |
| Non-farm rural to small town | | 1.14 |  | 1.27 |
|  |  | 0.79 |  | 2.00 |
| Non-farm rural to city |  | 0.99 |  | 1.41 |
|  |  | -0.06 |  | 3.44 |
| Urban (2500+) to Farm |  | 1.22 |  | 1.06 |
|  |  | 1.12 |  | 0.39 |
| Urban to non-farm rural |  | 1.12 |  | 1.45 |
|  |  | 0.75 |  | 3.67 |
| Urban to small town |  | 1.46 |  | 1.57 |
|  |  | 2.58 |  | 4.24 |
| Urban to city |  | 1.19 |  | 1.3 |
|  |  | 1.55 |  | 3.24 |
| N | 10375 | 10310 | 10375 | 10310 |
| chi2 | 70.9 | 101.62 | 930.26 | 1016.1 |
| Log likelihood | -14173.11 | -14014.73 | -25904.84 | -25684.85 |

**Appendix Figure 1. Location in 1930 of IWHS cohort matched to census**

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**Appendix Figure 2. Educational differences by migration status**

**Chart, box and whisker chart

Description automatically generated**

**Appendix Figure 3. Current smoking behavior**

**Chart, box and whisker chart

Description automatically generated**

**Appendix Figure 4. BMI at baseline interview**

**Chart

Description automatically generated**

**Appendix Figure 5. Self-rated health at baseline interview**

**Chart, box and whisker chart

Description automatically generated**

**Appendix Figure 6. Association of migration patterns with all-cause and cause-specific mortality**

**Chart

Description automatically generated**

**Appendix Figure 7. Association of SES measures in childhood with mortality after age 55**

**Chart

Description automatically generated**