

Linking work-life occupational exposures with distress and mortality before and after retirement

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Objectives & Hypotheses

We studied associations between occupations & psychological distress in the United States using nationally representative data with up to 36 years of follow-up. Hypotheses for people in higher-risk occupations:

- More likely to develop distress
- Higher mortality
- Particularly high distress & mortality in rural areas
- Higher risks will persist in retirement

Panel Study of Income Dynamics

- World's longest panel survey, 1968-present
- Over 70,000 participants
- Nationally representative
- Our study: 36 years follow-up, 1981-2017

Measures

Kessler et al. (2002) K6 index of psychological distress

Separate questions asked, "How often in the past month did you feel:" "nervous," "hopeless," "restless or fidgety," "everything was an effort," "so sad nothing could cheer you up," & "worthless."

Responses: "1. All the time" to "5. None of the time."

Scored in that order from 4 to 0, ≥ 13 = distress

Time-varying summary measure indicating current: K6 ≥ 13 , diagnoses of anxiety or depression, or self-reports of sadness affecting activities "a lot"

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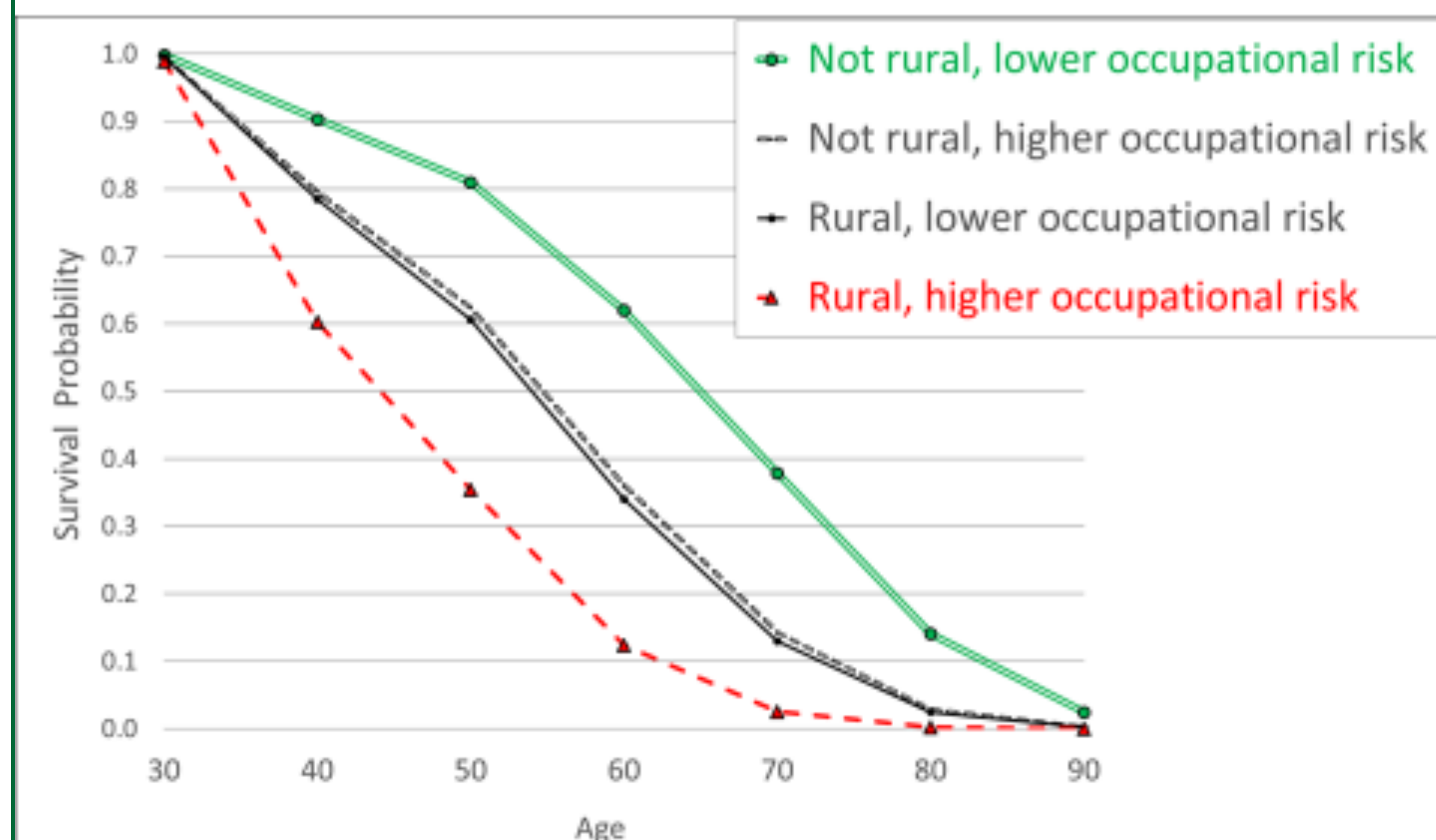
Higher-risk:

carpenters & joiners, cleaners, coal miners & operatives, cooks, personal care workers, laborers, plant & machine assemblers & operators, painters & plasterers, road construction workers, scaffolders & riggers, undertakers

Lower-risk reference category:

accountants; architects; butchers & meat handlers; directors & administrators; electricians; engineers; farmers, fishery, & forestry workers; health aides; lawyers; librarians; medical doctors; nurses; officials & supervisors; pharmacists; plumbers & pipe fitters; salespersons; teachers; technicians; welders

Rurality, Occupational Risk, & Mortality: Adjusted association, ≥ 10 years in a higher-risk occupation with rural & non-rural distress-related deaths



Results and Discussion

Each additional year in a higher-risk occupation increased the odds of developing distress by 5% (OR 1.05, 1.03-1.08, $p < .0001$).

≥ 5 years of higher-risk exposure increased the odds by 38% (OR 1.38, 1.18-1.62, $p = 0.0101$).

Retired individuals with two decades of higher-risk exposure had 40% greater distress risk.

For retired participants each additional year in a higher-risk occupation was associated with 4.6% higher mortality.

People in higher-risk occupations were more likely to develop distress

Dose-response: years in higher-risk occupations \rightarrow more distress

Higher-risk occupations \rightarrow higher mortality

Rurality combined with a higher-risk occupation \rightarrow high risks of distress, death

Earlier exposures to higher-risk occupations may have induced stress or other risks that persisted after retirement

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