

GROWING SOCIAL AND GEOGRAPHIC INEQUALITIES IN ALL-CAUSE MORTALITY, JAPAN, 1970 to 2005

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Background and Aims: While Japan has the lowest mortality in developed world, the magnitude and patterning of health inequalities remains less understood. We examined trends in social and geographic inequalities of all-cause mortality from 1970 through 2005.

Methods: We used the Vital Statistics and the Census data among those aged 25 or older and less than 65. For each sex, we estimated odds ratios (ORs) and 95% confidence intervals (CIs) for mortality by using multilevel logistic regression models with "cells" (cross-tabulated by age and occupation) at level 1, eight survey year at level 2, and 47 prefectures at level 3.

Results: Adjusting for age and survey year, compared with production process and related workers, ORs ranged from 0.97 (95% CI: 0.96-0.98) among administrative and managerial workers to 2.22 (95% CI: 2.19-2.24) among service workers in men. By contrast, in women, the lowest odds for mortality was observed among production process and related workers (reference) while the highest OR was 12.22 (95% CI: 11.40-13.10) among security workers. The degree of social inequality appeared to increase since 1970 in both sexes; ratios of the highest OR divided by the lowest OR for men were 2.48 and 3.97 in 1970 and 2005, respectively, and the corresponding ratios for women were 11.43 and 16.25. Conditional on individual age and occupation, overall geographic inequality of mortality were relatively small in both sexes; the ORs ranged from 0.87 (Okinawa prefecture) to 1.13 (Aomori prefecture) for men and from 0.84 (Kanagawa prefecture) to 1.11 (Kagoshima prefecture) for women. Although overall geographic inequalities of mortality were relatively small, we found growing inequalities in mortality across prefectures since 1995 in both sexes.

Conclusions: The present findings demonstrate that both social and geographic inequalities in all-cause mortality have increased recently in Japan.