

**Background:** Socioeconomic inequality in health has been a major concern in public health. This study examined socioeconomic inequality and mortality and the impact on inequality by specific cause of deaths in 2004 in Iran.

**Methods:** We used a dichotomous hierarchical ordered probit model to develop an indicator of socioeconomic status of households. We assessed the inequality in mortality by using the odds ratio of mortality between the lowest and highest socioeconomic quintiles at national levels. Mortality gradient by SEP for selected major causes of death in the population aged 0–49 years was examined using by quintile and rate ratio of mortality across quintiles.

**Results:** The poorest to richest odds ratio was 2.4. Furthermore, the inequality of mortality between the lowest and highest quintiles was significant and favored the better-off in most of the provinces. However, this inequality varied between sex, cause of death and distinct. Accident, cardiovascular diseases and cancer are the main causes of death in contemporary in Iran in age 49-0 years.

**Conclusions:** Socioeconomic inequality in mortality favors the better-off in richest in the country as a whole. As well as its national average, it is important to consider the provincial distribution of this indicator of population health. The findings indicate that socioeconomic inequality in mortality in Iran is determined not only by health system functions but also by factors beyond the scope of health authorities and care delivery system.