

survey in Japan found that education and income were associated with current smoking status, but that the association of education was significant only among younger population, while such age dependency was not observed in case of income. Another cross-sectional national survey showed that the association of income with mental health status was different across genders; there was found a strong negative relationship in males, while the reverse was found in case of females. Based on these findings, the presentation will conclude that better specified theoretical models for social gradient of health across educational attainment and income levels should be prepared to reach specific policy implication to achieve the equity in health.

SY13-02

Trends in Social Inequalities in Mortality from Road Traffic Injuries after the Introduction of Helmet Law in Taiwan: A Test of Inverse Equity Hypothesis ***Tsung-Hsueh Lu,¹ and Tung-Liang Chiang²***

1. Institute of Public Health, College of Medicine, National Cheng Kung University, Tainan, Taiwan
2. Institute of Health Policy and Management, College of Public Health, National Taiwan University, Taipei, Taiwan.

Objective: To examine whether there was an initial increase and then decrease of social inequalities in mortality from road traffic injuries (RTI) after the passage of helmet law in Taiwan as 'inverse equity hypothesis' (IEH) depicts.

Methods: Median household income was used to rank and group 23 cities/counties in Taiwan into four socioeconomic position (SEP) regions. RTI mortality rates differences and ratios between high and low SEP groups and the richest and the poorest regions from 1987 through 2006 were calculated to examine the trends in social inequalities in RTI mortality. Helmet use rates of each city/county from 1996 through 2004 were extracted from traffic accident dataset.

Results: The RTI mortality rate differences between the poorest and the richest regions decreased immediately after the passage of helmet law. However, the RTI mortality rate ratios did not decrease until 2003-04, a four to five years time lag. The ratio was 7.03 in 2001-02 and decreased to 6.18 in 2003-04 and persistently decreased to 5.74 in 2005-06. We found a 3 to 4 years time lag in promotion of helmet use rate between low and high SEP regions.

Conclusion: The social inequalities in RTI mortality increased first and then decreased after the passage of helmet law in Taiwan as IEH depicts. Passage of enforced legislation alone could not reduce the social inequality in health unless an equally rigorous enforcement across SEP regions was assured.

SY13-03

Social Determinants for Healthy Aging: A Compared Study between Urban and Rural Elderly People in Zhejiang Province

Kun Chen, Biao Zhou, Hui Wang

Department of Epidemiology and Health Statistics, Zhejiang University School of Public Health, Hangzhou 310058, China

Objective: The aim of this study was to explore the potential social determinants for healthy aging in the rural and urban elderly population of China, and to compare the differences between these two groups. **Methods:** A cross-sectional study was conducted from October to December, 2007. Based on community population aged 60 and over, 2441 in rural area and 2554 in urban area were enrolled, respectively. A Chinese version of the 36-item Short Form Health Survey (SF-36) including 8 scales was used to quantify the health related quality of life (HRQoL) reflecting the healthy aging status of participants. The association between potential social determinants and HRQoL was analyzed using a multiple linear regression model.

Results: The scores for SF-36 were significantly lower ($p < .001$) in the rural elderly comparing to the urban population in dimensions of PF (71.2 ± 25.0 vs 77.7 ± 21.9), RP (48.0 ± 48.0 vs 78.0 ± 39.3), BP (82.1 ± 20.4 vs 89.4 ± 18.8), VT (66.0 ± 15.5 vs 81.1 ± 15.0), SF (78.8 ± 20.7 vs 87.6 ± 19.8), RE (50.7 ± 47.8 vs 84.7 ± 34.0), and MH (67.4 ± 12.7 vs 77.3 ± 12.6) but GH (55.3 ± 20.7 vs 56.4 ± 20.3). In both of rural and urban populations, age was negatively related with PF, RP, VT, and SF scale scores ($p < .05$). But the correlations were significantly positive, such as between gender (male) and PF, BP; income level and PF, BP, RE; tea consumption and all scales except for RP, BP as well as alcohol consumption and PF, GH, SF scale scores ($p < .05$). There were existing negative associations between ex-drinking and GH, VT, SF, MH; ex-smoking and PF, GH, VT scale scores ($p < .05$) in the rural elderly, while living alone and PF, GH, VT, MH scale scores ($p < .05$) in the urban elderly, respectively. The positive linkages in urban area was also found between current smoking and GH scale score ($p < .05$), educational level and PF, VT, RE, MH; regular exercise and all scale scores in urban area, respectively ($p < .05$).

Conclusion: The common social determinants for aging in both of rural and urban elderly populations were age, gender, income level, tea consumption and alcohol consumption and so on. But the fact that some special social determinants, such as smoking, educational level, living arrangement, regular exercise etc., show to be different in urban and rural areas, which can interpret the disparities in health status of rural and urban populations. The official statistics and literatures also confirm that there is a deep gap of economic and social conditions between the rural and urban area resulting to the health inequalities. In a word, social determinants play important roles in healthy aging.