Multivariate multilevel analyses of the influence of social capital on self-rated perceptions of health: Multivariate response models with missing data

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In the study of social capital on health much interest enters upon multilevel analyses and the correlation between social factors and health at individual and aggregated level. The analyses based on population-based social survey data, usually include no response. In this presentation we applied multivariate multilevel models for the analysis of such data with missing values (Leyland & Goldstein, 2001).
The data were population-based random samples from Japan, USA, and Germany as well as East Asia countries and areas (Yamaoka, 2008). The outcome measures were perceived health such as self-rated health, number of symptoms, life satisfaction, health satisfaction, and happiness. The outcome measures were treated as simultaneously in a multivariate space. The exploratory factors were social capital and socio-economic status. The following substantive questions are of interest.
(a) Does regional difference exist in perceived health at regional level? If so, how large the regional difference is?
(b) Does individual social capital explain the regional difference of perceived health? Does aggregated social capital still effects on perceived health?
(c) How are the effects of the predictor variable related to social capital at individual and aggregated levels?

We fit several multivariate multilevel models of fixed and random effects with the combinations of social capitals and related factors under the several assumptions for missing treatment. This then enables more appropriate comparisons and correlation estimates. Details will be shown in the presentation.

REFERENCE

Yamaoka, K (2008) Social capital and health and well-being in East Asia: A population – based study, *Social Science & Medicine*, 66, 885-899.

Leyland, A.H. & Goldstein, H. (2001) (Eds.) Multilevel modelling of health statistics, *John Wiley & Sons, Ltd*, New York.