

Diagnosis based life expectancy and its determinants among
Estonian native and immigrant population
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Estonia, with a total population of slightly more than 1.3 million in 2011, offers an interesting opportunity to investigate the health transition and its determinants. This country has been among the forerunners of the demographic transition (Coale et al. 1979; Katus 1994). This implies that the so-called epidemiological transition follows the trends of that of Northern and Western Europe (Omran 1971; Caselli 1995). However, the occupation of Estonia by the Soviet Union, which began in the 1940s and lasted for almost 50 years, introduced other systems, one of which pertained to health care. This system was built up to tackle the challenges that had already overcome by Estonia by the beginning of the Soviet period.

Estonian society is characterized by one of the largest and oldest immigrant populations in Europe (Katus et al. 2003). This immigrant population comes mostly from former territories of the Soviet Union.

Significant changes in life expectancy (LE) and the nature of the causes of death that have occurred in the last decade lead us to focus on two main health challenges in the Estonian population: until recently, an ever-widening gender gap in LE, comprising one of the highest proportions of male excess mortality in Europe, and a persistent gap in LE between the immigrant and native populations. As some research has shown, in the beginning of a period when one enters a new phase of the transition, divergent trends can be seen among different population groups (Vallin and Meslé 2005).

In this study we focus on remaining life expectancy related to specific causes of death. Two subpopulations – immigrants and natives – will be analysed separately. The interest is to find out whether population groups that live in the same society and have similar socio-economic backgrounds will experience different remaining life expectancies from the time point when chronic diseases were diagnosed.

The hypotheses are that the length of life after the diagnosis is related to nativity and gender. This heavily relies on the different habits of the health behavior. In case of same diagnosis we expect to see that the life-span is remarkable shorter for the immigrant population and for males compared to the natives or female population.

The analysis is retrospective and based on the event-history approach. To explain the results, additional covariates will be included to the model that describes health care utilization and risky health behavior such as smoking or alcohol consumption.

We will focus on two big groups of diseases, those of the circulatory system and cancer. In addition, the third main group of causes of death of our interest is external causes.

We will use three datasets for this analysis: Estonian Health Interview Survey 1996 (Est HIS 1996), Estonian Health Interview Survey 2006 (Est HIS 2006) and death certificates information from the Causes of Death Registry. Survey data and death information will be linked in the Causes of Death Registry. The sample sizes of Est HIS 1996 and Est HIS 2006 were 4711 and 6434 respectively. Both surveys involved a partly life-course approach. Therefore, information about health behavior and chronic conditions are available from the retrospective point of view.

Data analysis is presently under way

References

Caselli, C. (1995). The key phases of the European health transition. *Polish Population Review*, 7, pp. 107-125.

Katus, K., Puur, A., & Sakkeus, L. (2003). Immigrant population in Estonia. In W. Haug, P. Compton & Y. Courbage (Eds.), *The demographic characteristics of immigrant population. Population studies*, 38, pp. 131-192.

Omran, A. (1971). The epidemiologic transition: a theory of the epidemiology of population change. *The Milbank Quarterly*, 49, pp. 509-538.

Vallin, J., & Meslé, F. (2005). Convergences and divergences: an analytical framework of national and sub-national trends in life expectancy. A new approach to health transition. *Genus*; LXI(1), pp. 83–124.