

Introduction

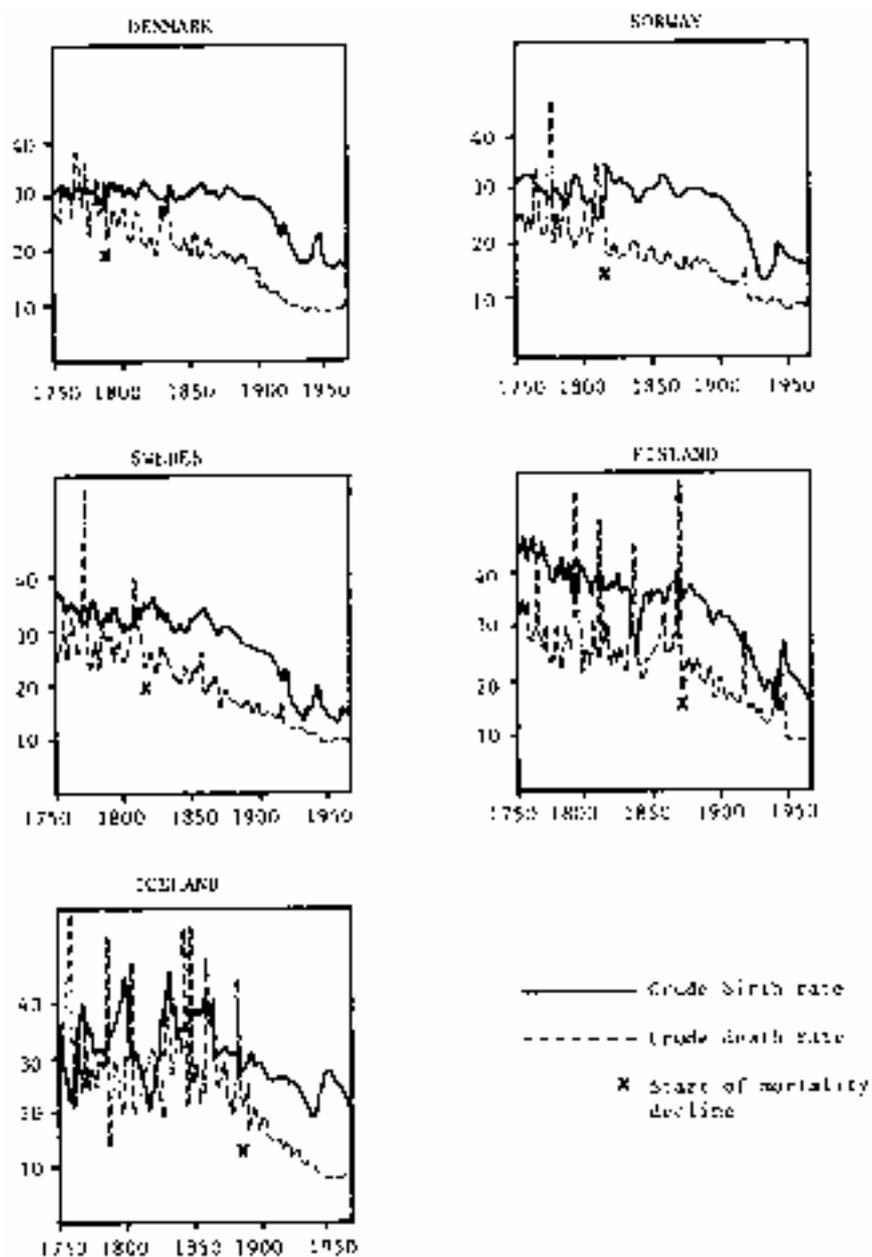
Anders Brändström, Sören Edvinsson, and John Rogers

One of the most successful achievements in improving the health of populations has been the reduction of infant mortality. In many European countries infant mortality rates have declined from levels often above 200 infant deaths per thousand live births to less than ten within the time span of a century. Furthermore, it is clear that the reduction of mortality among young children was to a very large extent due to human intervention. In this context the Nordic countries have been and continue to be in the forefront.

In all of the Nordic countries the secular decline in mortality was to a large degree due to a reduction of infant deaths. This is not to say, however, that the decline of mortality followed the same pattern in each country. If we consider the timing of mortality in the demographic transitions of the Nordic countries, we find that mortality started to fall at very different points in time. In Denmark the crude death rate began to fall in the last decade of the eighteenth century. In Sweden and Norway the downward turning point started at the beginning of the nineteenth century. For Finland and Iceland mortality declined much later, during the latter half of the nineteenth century (Figure 1).

Information on infant mortality varied among the Nordic countries. For Sweden and Finland time series exist from 1749 onward. Denmark began publishing national statistics on infant mortality in 1835, Norway in 1836 and Iceland in 1838 (Figure 2). Infant mortality trends and levels differed considerably in the Nordic countries. In Finland a pattern with constant high rates and large annual fluctuations is found from 1749 to the late 1860s. Sweden's infant mortality was slightly lower than Finland's in most years during the eighteenth century. In the first decade of the nineteenth century infant mortality fell in Sweden and the gap between the two countries increased. Compared to the other Nordic countries, Norway had significantly lower infant mortality and less pronounced annual fluctuations. Infant mortality was higher in Denmark than in Norway, and very similar to Sweden from 1830 onward. Iceland, on the other hand, had extremely high rates of infant mortality, among the highest in Europe, with certain years exceeding 400 deaths per thousand live births. Iceland did not reach levels similar to the other Nordic countries until the 1880s. In summary, Denmark Norway and

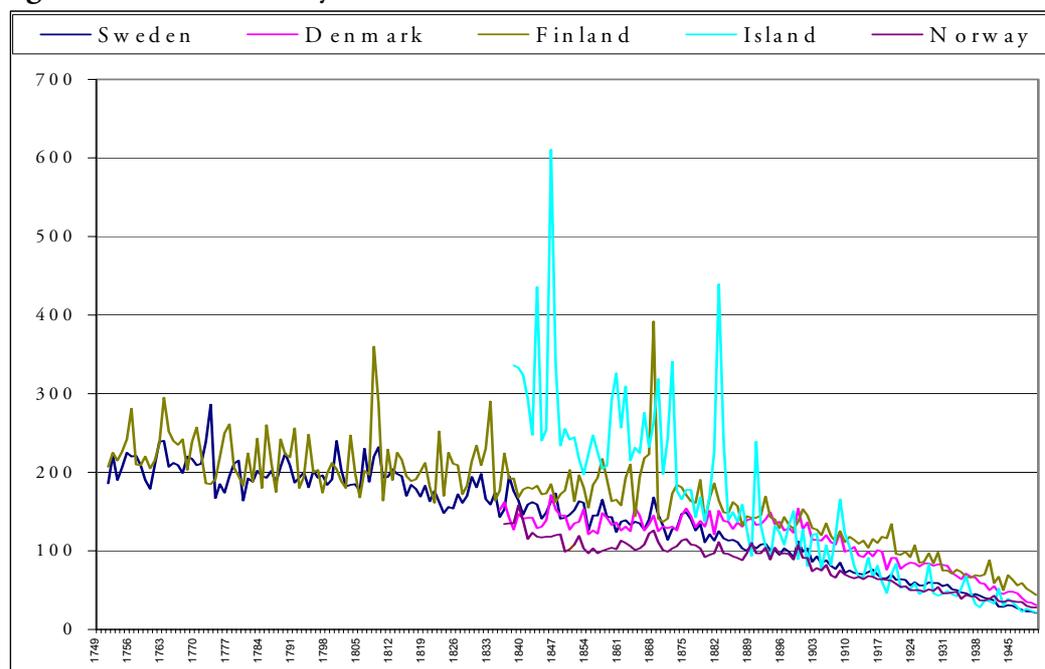
Figure 1. The demographic transition in the Nordic Countries.



Source: Ståle Dyrvik, "Comment," *Scandinavian Population Studies*, 5 (1979), 99.

Sweden exhibited similar patterns during most of the nineteenth century. In Iceland and Finland infant mortality declined first during the second half of the nineteenth century. At the turn of the nineteenth century, infant mortality in all of the Nordic countries converged, although Finland and Denmark continued to have slightly higher infant mortality rates. If twentieth century infant mortality in Europe is

Figure 2. Infant mortality in the Nordic Countries, 1749–1950.



Source: *Historisk Statistik för Sverige 1720–1967* (Stockholm 1969); B. R. Mitchell, *European Historical Statistics 1750–1970* (London, 1978); Oiva Turpeinen, “Fertility and Mortality in Finland since 1750,” *Population Studies*, 33:1 (1979); *Hagskinna. Icelandic Historical Statistics*, eds. Guðmundur Jonsson and Magnus S. Magnusson (Reykjavik 1997).

compared, all of the Nordic countries are in the group characterized by the lowest level of infant mortality throughout the entire period.¹

However, national figures are only averages and often conceal very different mortality regimes. The results from several historical studies undertaken in the Nordic countries, some conducted already in the nineteenth century, clearly indicate that infant mortality varied considerably within each country. As was commonplace elsewhere, urban infant mortality was higher than rural infant mortality until the twentieth century. In Norway, Sweden and Finland a coast-inland pattern appears to have existed with higher rates on the coast. Furthermore, infant mortality was higher in northern Finland, Sweden and Norway compared to the central and southern parts of the respective countries.

Several micro-demographic studies on infant mortality have been published in the Nordic countries during the last 20 years.² They have used quite different

1 Goodelieve Masuy-Stroobant, “Europe: Infant Health and Infant Mortality,” in Carlo A. Corsini and Pier Paolo Viazzo, *The Decline of Infant and Child Mortality. The European Experience: 1750–1990* (UNICEF 1997), 5.

2 For a review of research on infant and child mortality in Sweden, see, John Rogers,

methodologies and points of departure, making comparisons difficult. Furthermore, very different explanations as to why infant mortality started to decline are put forth. Some stress the importance of nutrition and economic development (for instance, changes in income and grain prices); others suggest changes in social structure, childcare, or feeding practices. However, all agree that no single cause explains the mortality decline. Rather, a very complex web of factors contributed to the decline in infant mortality. This, in turn, clearly indicates that a comparative approach, adopting a common research agenda and using similar methodologies, is necessary.

The need for such an approach led to the creation of a Nordic comparative research project: "The development of a welfare society. The decline of infant and childhood mortality in a Nordic and European perspective, ca 1750–1950." The project was launched in 1995 and organized as a forum or a meeting place for several national research projects. The project received financing from the Joint Committee of the Nordic Research Councils for the Humanities (NOS-H) for annual project meetings during a four-year period. Five meetings, or workshops have been held, two in Umeå, Sweden, one in Copenhagen, Denmark, one in Stockholm, Sweden, and one in Madrid, Spain as a joint venture together with an international research project.

In order to facilitate comparison, three main factors or aspects of particular interest for an analysis of the development of historical infant and childhood mortality were considered.

Regionality: Central to the comparison is an analysis of regional differences in infant mortality within each country. Detailed maps showing the development of infant mortality in time and space for each participating country have been created. Maps for selected points in time, where data of similar quality and level of aggregation is available, are also included.

Child feeding practices: Previous research has shown that breastfeeding and/or the use of artificial feeding differed substantially among social groups and between regions. As breastfeeding often had positive effects so strong that they could counterbalance the effects of poverty and other negative influences on infant mortality, an analysis of breastfeeding patterns has been included in the comparison.

Illegitimacy: In nearly all studies of infant mortality, children born out of wedlock experienced a lower chance of survival. This is true, regardless of religion, social

"Nordic Family History: Themes and Issues, Old and New," *Journal of Family History*, 18:4 (1993), 291-214 and a workshop paper by Sören Edvinsson, Marie C. Nelson and John Rogers, "Dying Young: Swedish Infant and Childhood Mortality in Review," *Hygiea Internationalis* [<http://www.liu.se/tema/inhph/journal/>]

class, economic position or country of origin. The percentage of illegitimate births of all live births often differed considerably within each Nordic country. Differences in infant mortality between legitimate and illegitimate children were often substantial, indicating that this also is a key factor in any comparative analysis of infant mortality.

Within the project an inventory of relevant sources for an analysis of the causes of death was undertaken, as well as the development of a common coding scheme for such an analysis.

Many of the research results of the Nordic collaboration have been presented in various articles and papers.³ This volume constitutes the final report of the research project. The three factors, regionality, infant feeding practices and illegitimacy, are discussed in reports on developments in the respective countries. Also included are two special case studies. One considers social differences in infant mortality in the parishes of Asker and Bærum in Norway where levels of infant mortality were relatively low. The other is a methodological study on the causes of death among infants in Linköping, a town in Sweden. Each article thus contributes in a different way toward a better understanding of the mortality decline in the Nordic countries during the last two hundred years and draws attention to important factors which stress similarities as well as differences between countries and between regions within each country.

³ A full list of articles and papers from the project is found in the appendix to this volume.