

Is it the Mother's Health that really matters?

Infant mortality in Asker and Bærum during the late 18th and early 19th century

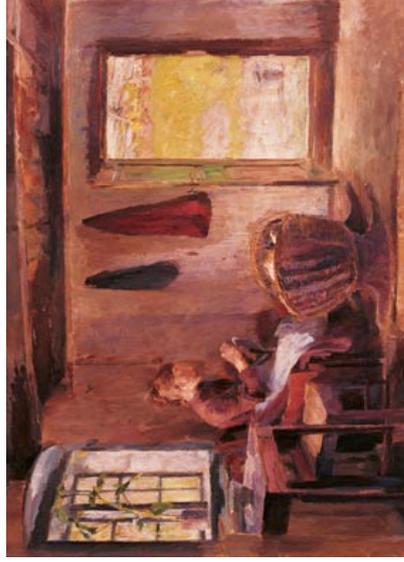
Introduction

Yearly figures on infant mortality in Norway are available at the national level from 1836, but in order to find out more, it is necessary to explore at the individual level. Parish investigations indicate an average level of infant mortality around 18 per cent at the beginning of the 19th century. This level is also found in Asker and Bærum, the area chosen for this study.

Asker and Bærum is a parish in the coastal area of southeastern Norway, close to the capital.

Analysis has shown that women who were born in years with high infant mortality had an increased risk of giving birth to infants who died neonatally. A possible explanation is that some of these mothers were born under adverse conditions, either caused by disease or undernourishment, in utero or in early infancy. They might have been programmed to bear weaker infants, e.g. children with lower birth weights than women who were born in years with low infant mortality.

Data digitized by Norwegian Historical Data Center at Tromsø and Bardufoss



Mother and child. Motive from Skotta in Bærum. Harriet Backer, without title, 1887.

Question

Were mothers born in difficult years imprinted by the adverse conditions so that they in turn, when they gave birth, had an increased risk of seeing their infants die?

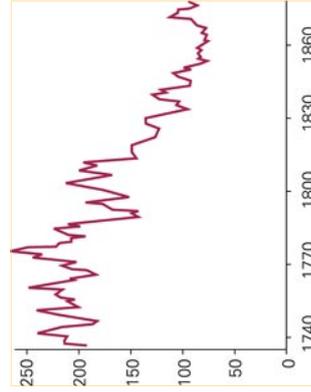
Data

The Asker and Bærum data set consists of linked records at the individual level. The data originate from censuses, church records, and land registers. We do not know the health status at birth of the mothers in this study, so it is necessary to use a proxy. We know that infant mortality was rather low in Asker and Bærum during the 1790s, and rather high during the first decade of the 1800s.

First cohort = the 'good' periode, mothers being born between 1790-1799.

Second cohort = the 'bad' periode, mothers being born between 1800-1809.

N=2298, 42 dead.



Infant mortality in Asker and Bærum, 1733-1878. Five-years moving average.

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Cox regression analysis of mortality for infants whose mothers were born in the 1790s and 1800s and who survived from the second to the 31th day after birth.

Variable	Parameter estimate	Standard Error	P-value Chi-Square	Risk Ratio
Birth year of mother (ref. 1790s)				
Mother born in 1800-1809	0.63	0.27	0.02	1.89
Multiple births (ref. single birth)				
Twin	2.41	0.36	0.00	11.18

Results and Conclusion

The Cox regression analysis shows that the neonatal mortality was twice as high for infants whose mothers were born in years with high infant mortality. The adverse effect of having a mother born in years of crisis is even stronger if we look at children born before 1830. After the neonatal period there were no differences according to year of birth of mother.

In a society where breastfeeding was prevalent, neither food shortage nor contagious diseases were important as immediate causes of neonatal deaths. Indirectly these causes may have had an effect, through the infancy (or fetal stage) of the mothers.

Thus the old commonsensical hypothesis of a correlation between improved living conditions and a decline in infant mortality may after all have something to recommend it, if the effect is allowed to work through a generation.

Reference

Eli Fure (2002), 'Is it the Mother's health that really matters? Infant mortality in the parish of Asker and Bærum 1814-1878', in Hilde Sandvik, Kari Teiste, Gunnar Thorvaldsen (eds), *Pathway of the past. Essays in honour of Sølvi Sogner* [..]. Tid og Tanke, Oslo.

En av artiklene doktorgradsavhandlingen; ...en besynderlig Regelmæssighed

Dødeligheten i Asker og Bærum på 1800-tallet med særlig vekt på

Spedbarns dødeligheten. Doktorgradsavhandling. Oslo: Historisk institutt, Universitetet i Oslo, 2004