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Child and infant mortality in 19th century Hungary from-micro perspective: the impact of parents' widowhood and remarriage on their children's survival, a comparative analysis

Abstract

On the basis of research on pre-modern mortality and marriage, we know well that getting widowed and remarrying happened frequently in pre-modern societies, consequently living in stepfamilies, having stepparents or stepsiblings must have been also common phenomena. At the same time, these events and conditions must have significantly influenced the orphans' or stepchildren's survival, although in Hungary very few relating quantitative analyses have been carried out so far.

Our family reconstitution database of a rural micro-region close to Budapest (the Roman Catholic village of Zsámbék inhabited by 18th century German settlers, and the Hungarian and Calvinist village of Tök), based on parish records may give an exceptional opportunity to examine these connecting demographic events. The parish records and the surviving census data of a suburb in Budapest (Újlak – Neustift) also make this kind of analysis possible, providing an opportunity for urban-rural comparison as well. In our analysis we are going to focus on the period 1750–1870 (or on the period 1857–1873 in the urban case), which can be doubtlessly regarded as pre-modern or traditional in demographic sense. We will use multivariate statistical method (event history analysis) in order to reveal the link between children's and young adults' chances of surviving and their parents' deaths or remarriages. We will follow individuals from birth up to death or age 15, and in two models we will examine the likelihood of dying among infants and children. Among other variables (sex, period, socio-professional status of fathers, number, sex and age of siblings, etc.) the impact of getting orphan or stepchild will be analysed. In this way, one can statistically test the traditionally negative view on being stepchildren in traditional societies.

Goals of the analysis

As a result of high mortality and the remarriage of widowed parents, stepfamilies, in which siblings, half-siblings and step-siblings lived together with parents and stepparents, were common in the past. On the other hand, living and growing up as an orphan or in a stepfamily is generally considered as disadvantageous with possible serious risk factors regarding later life events (an enhanced likelihood of dying or out-migrating or a significantly less likelihood of marrying). Analyses based on historical demographic longitudinal micro-data (parish records, vital statistics, population registers) may provide us with the necessary evidence in this respect. While the effects of parental loss on infants' and children's lives is a well examined field of historical demography (eg. Derosas – Oris 2002. Bengtsson et al. 2004), the analysis of how the remarriage of parents and the existence of step siblings or the birth of half siblings affected children's survival is much less usual (see e.g. Willführ – Gagnon 2013). Although with respect to these two sorts of analysis we have numerous examples in the literature related, regarding Hungary only the effects of parental loss have been examined so far (Pakot 2013). In our paper we would like to uncover the effects of parental loss on the one hand, and those of remarriages of surviving parents on the other hand. In the analysis we are going to focus not only on parents' survival or remarriages but we try to take into account other elements of family composition, as our sources make it possible. Thus, the birth order, the existence of older brothers and sisters and in the case of stepfamilies the existence of step siblings or the birth of half siblings are to be examined.

As we can use only parish records in the course of the analysis, and we have no data on actual household composition, we do not know exactly which relatives co-resided at a given moment. But we have data on parents' death or on siblings' birth and death. On the basis of these data, we try to reconstruct to some extent the household context of the analysed phenomenon. We would like to better understand how infant and child mortality were influenced by these family level factors, if living in stepfamilies together with step or half siblings meant an additional risk of dying for infants and children, or on the contrary, remarriage of the widowed parents meant a better chance for surviving.

Data and methods

This paper is based on parish records the data of which have been collected and linked in German Genealogical books (*Ortsfamilienbücher*) in the case of Zsámbék.¹ These books can be regarded as complete family reconstitution databases. Our analysis has been based on these genealogies although their data have been completed by those of the original sources (especially occupational data). In the case of Tök, we use parish records, and in the case of Újlak, parish records for a period with three consecutive censuses (1857, 1860 and 1873), which help us to close the examined life-courses. This family reconstitution database containing the accurate dates of demographic events (births, marriages, deaths) linked one to another means the basis of event history analysis (Gutman – Alter 1993, Alter 1998).

In our paper we follow children from birth up to death or 15 years of age in one of our models and from the remarriage of mothers or fathers up to death or 15 years of age in our other model (Willführ – Gagnon 2013). By the first model we are going to examine first of all the impacts of parental loss whereas by the other those of having stepsiblings or the births of half siblings on infants' and children's survival. We examine the likelihood of death taking into account different kinds of covariates: individual features (sex, age at parental loss, age of mother at birth, birth order), household context (death and remarriage of the parents, existence of older brothers and sisters, or that of stepsiblings, birth of half siblings), socio-economic status of fathers and historical period as an exogenous factor.

Expected results

On the basis of our preliminary results concerning Zsámbék (prior to 1850), we expect strong negative effects of parental loss but with marked differences between paternal and maternal loss. A mother's death must have been fatal but evidences are different regarding the death of fathers (Oris – Derosas – Breschi 2004, Pakot 2013). The death of fathers might have small effect on infants' survivorship while the negative impact can be observed in higher age groups. As for remarriage, it could mean a negative effect, a risk factor especially if the mother died and father remarried (Willführ – Gagnon 2013) but a much smaller negative effect in the case of widowed mothers' remarriage. It can show that the remarriage of parents could be a risk factor (less parental care for example) but the means of surviving in other cases. All in all, one must differentiate by the age of children or the sex of the parents lost. As for siblings, the presence (or in our case the existence) of older brothers and sisters might have decreased the risk of dying or mitigated the effects of parental loss (Pakot 2013, 122–123). Similarly, the presence of younger brothers and sisters might prove advantageous meaning the less risk within the family. Family heterogeneity (the uneven risk mortality risk among families) can be also demonstrated in this way. We also expect that socio-economic status mattered in this respect and changes over time can be also observed in the course of the analysis (See figures in the appendix related to Zsámbék).

References

¹ The genealogy of Zsámbék (Roman Catholics) has been published (Gallina-Jelli 2002).

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Appendix

Figure 1: Infant mortality in Zsámbék, (1770–1850)

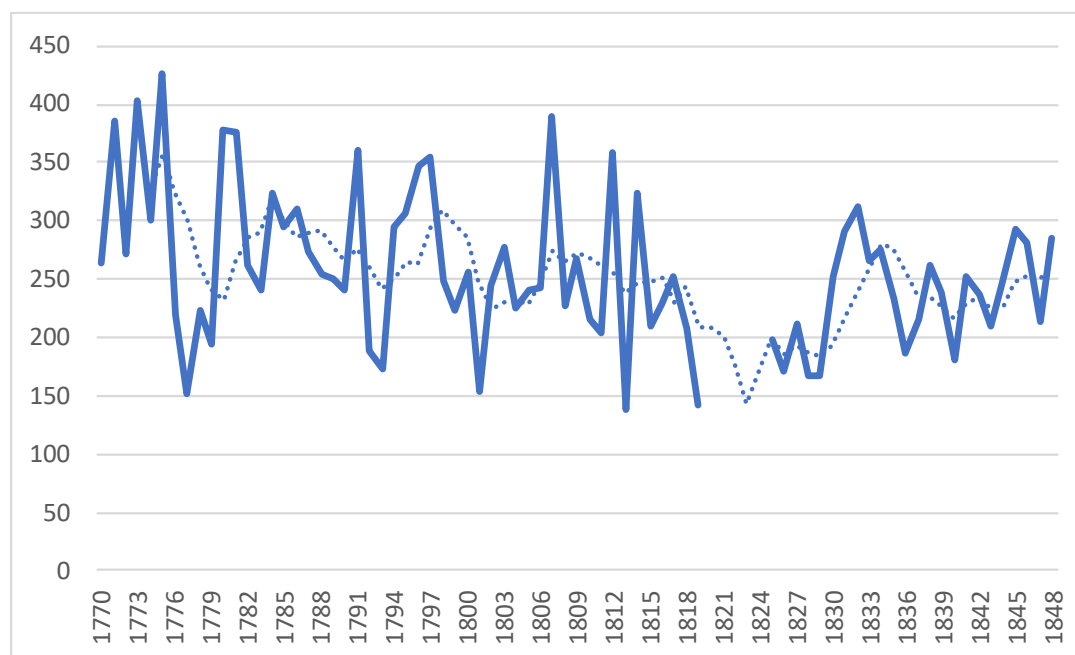
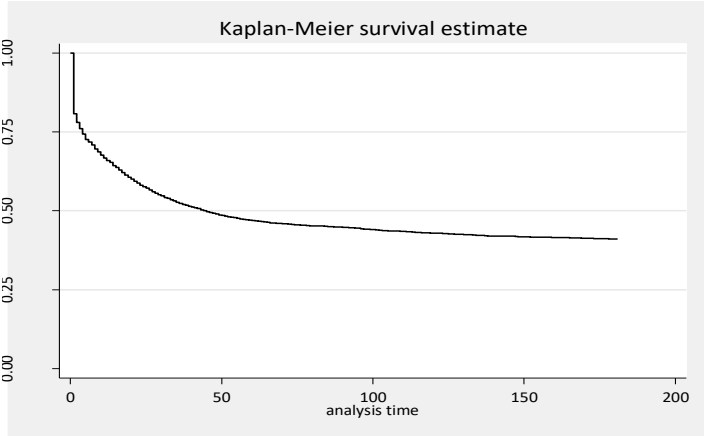


Figure 2: Survival from birth to age 15 (Zsámbék, children born prior to 1850) by sex

Boys



Girls

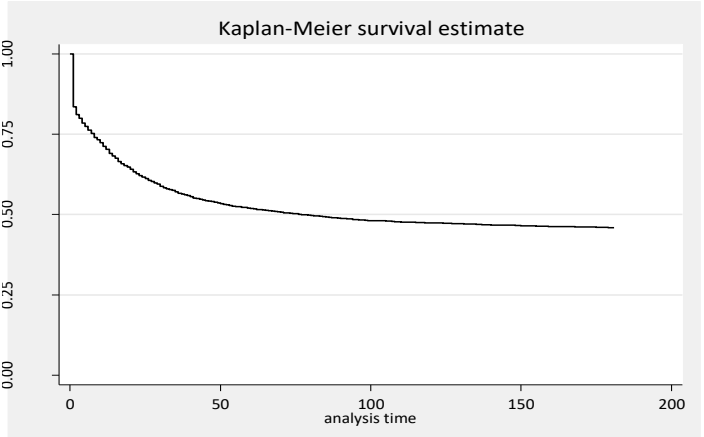
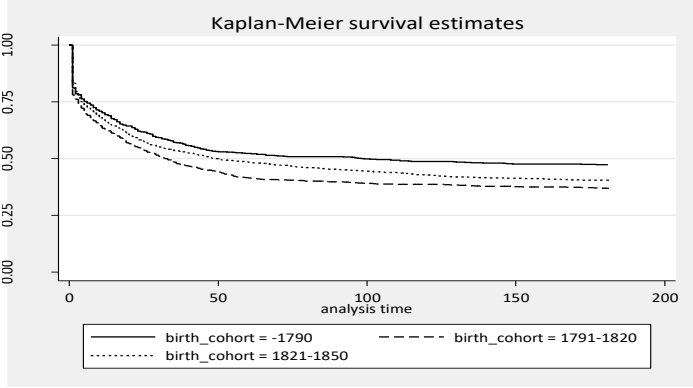


Figure 3: Survival from birth to age 15 (Zsámbék, children born prior to 1850) by sex and birth cohort

Boys



Girls

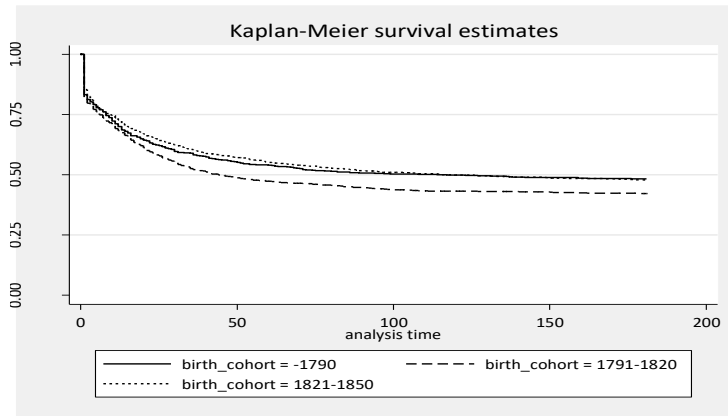


Table 1: event history analysis, the likelihood of death under age 15 (Zsámbék, prior to 1850) by the life status of parents

Zsámbék, boys			
		Hazard ratio	p-value
Parents	both alive	1	
	father dead	1.537	***
	mother dead	1.064	
	both dead	1.203	
	father remarried	2.676	***
	mother remarried	1.802	*
	missing	1.126	*
Zsámbék, girls			
		Hazard ratio	p-value
Parents	both alive	1	
	father dead	1.245	
	mother dead	1.211	
	both dead	4.593	***
	father remarried	2.141	***
	mother remarried	1.358	
	missing	1.288	***
*** p<0.001 ** p<0.01 * p<0.05 † p<0.1			
Stratified by age group			
Also controlled for birth cohort and age of mothers at birth, birth rank, presence, age and sex of siblings, fathers' SES			