

THE INEQUALITY OF INFANT MORTALITY

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Abstract: *The traditionally high value of infant's mortality in Hungary has been basically influenced by the extremely high figure and rate of premature births during the last decades. The effects of the risk factors on the various levels of the social hierarchy are different. The difference between the infant's mortality value of the ranks of the social hierarchy has increased considerably since the beginning of the 1980s. Infant's mortality should be explained and treated as a complex social, sociological and medical problem.*

Key words: *Infant mortality; Premature birth; Mode of life; Social inequality.*

All over the world, the rate of infant mortality is regarded as one of the indices of the degree of civilization, which projects the economic, cultural conditions and the level of development of public health in a given country. It is considered as one of the most sensitive demographic characteristics of the inequality of chances of the people living on the different levels of social hierarchy.

It's rate has been regularly recorded in European countries since the middle of the 19th century. The data registered in various countries showed significant differences as early as one and a half centuries ago. In 1850, one-tenth of one thousand live neonates died before the age of one year in Norway (102‰), while three times as many in Germany (297‰).

In Hungary there has been statistical data collection since 1891, when the rate of infant mortality amounted to 272‰, one of the highest in Europe. Up to the end of the last century one out of four infants born in Hungary had not lived to turn one year old. The 200‰ rate of infant mortality at the turn of this century has dropped below one-tenth since then. Despite the continuous decrease, Hungary as compared with the European countries traditionally ranks at one of the last places, lagging about 15-20 years behind the developed European countries.

Significant differences can be discovered in the decreasing rate of infant mortality according to the newborns' ages. The value of the death rate during 0-6 days has remained more or less the same but the value of the death rate during 28-364 days has decreased considerably during the last 60 years (Table 1).

**Table 1. Structure according to the age of infant mortality in Hungary.
Number of deaths under the age of one year out of 1000 live births.
(Reference: Demographic Yearbook, 1990, Budapest, KSH)**

Year	Death rate per days			
	0 — 364	0 — 6	7 — 28	28 — 364
1891	272.0			
1900	225.7			
1910	196.1			
1920	192.5			
1930	152.5	29.9	33.9	94.7
1941	115.6	26.4	19.8	69.4
1950	85.7	23.6	14.7	34.7
1960	47.6	22.1	5.3	20.2
1970	35.9	24.5	3.9	7.5
1980	23.2	15.3	2.6	5.3
1990	14.8	8.7	2.1	4.0

One of the two main causes was a worldphenomenon but the other was a result of the specific Hungarian circumstances. Today it is definitely easier the treatment of the acquired – usually infectious – infant diseases in the countries having a developed health care system than to keep the survival of the highly immature premature infants. However the extremely high frequency of the premature rate and the unfortunate weightspecific death of the newborns are specific Hungarian phenomena basically determining the total value of the infant mortality. The value of our premature rate is about double, the death rate between 0–6 days is about three times higher than in the West-European countries. In Hungary today the mortality of the infants born with less weight than 2500 grammes is about twenty times higher than the mortality of the ones being born with a higher weight value. Therefore we have to search the reasons of the infant mortality among the reasons of premature.

The value of the premature ratio increased considerably in the 1950s–1970s. That time the frequency of premature births grew in the wake of the increasing trend of induced abortions was blamed for the hardly decreasing infant mortality. In the analysis of various indices of morbidity and mortality, it became widespread to stress the irresponsible way of life of a part of the population. It became generally accepted that for the high rate of infant mortality in Hungary the women who underwent induced abortion, drank, smoked, and lived under poor hygienic circumstances were responsible in the first place. The government tried to cover up the actual social causes, the existing social differences, and the problems of the national health service (the lasting underfinancing of public health, and the wrong domestic practice of abortion, the most drastic method, dilatation+curetage used en masse).

As a result of the provisions of Population Policy Decree of 1974 (administrative restriction of abortion, campaign of hygienic education, a wider range of contraceptives) the rate of induced abortions suddenly dropped by half, leaving of premature births almost unchanged. Thus statistics refuted the previously prevalent view that had blamed the rate of induced abortions for the high infant mortality (*Figure 1*). It is obvious for professionals that a string of induced abortions in the obstetrical anamnesis significantly reduces the chances of bearing to the full time of pregnancy, but in the light of the present stage of our knowledge innumerable biological demographic, economic, and sociological factors play a role in the formation of body weight at birth (Boócné 1991). The separation and weighting of the influencing factors will defy solution, for they exercise their effects now strengthening, now weakening each other. Biological and social factors become social and biological ones respectively, thus shaping the social inequality of infant mortality.

The disadvantages of the heterogeneous modernisation in the socialist countries – employment of the women, hazards at the place of work, overforced industrialisation, increasing environmental pollution, increasing mobility – had their effects in Hungary as well. The extensive industrialization caught up unskilled female labour force in the masses. The almost full employment of women was not first of all due to endeavour aimed at emancipation, it was brought about by economic necessity. Males could not provide for their meagre pay kept artificially low. Unskilled women were often compelled to take up jobs not suitable for their biological constitution. Mothers with small children were exposed to an increased psychic burden, as they laboured under a stress of lack of time for meeting their obligations both at the place of work and in the family.

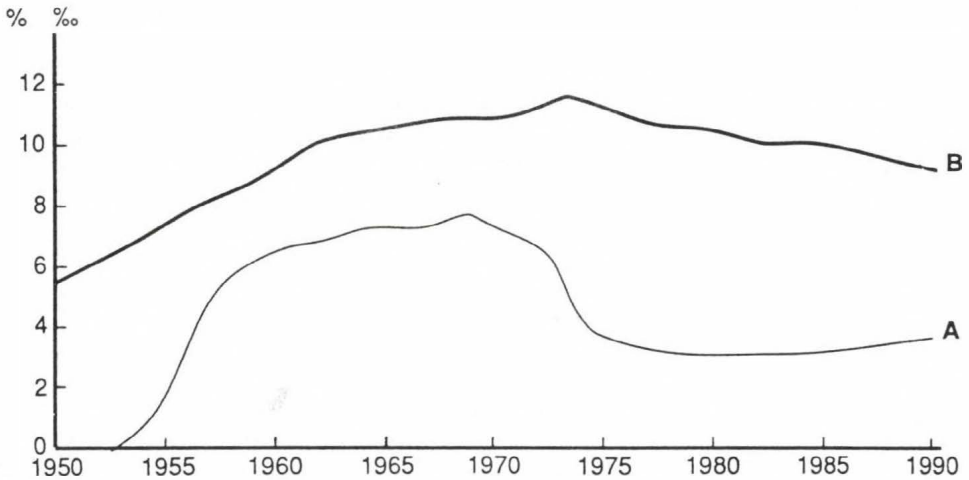


Fig. 1: Formation of rates of induced abortions and premature births
 A: Number of induced abortions in women 14—49 years of age (‰); B: Number of neonates born under 2500 grammes of body weight per 100 live births (‰)
 (References: Demographic Yearbooks, 1965—1990, Budapest)

As opposed to the other former socialist countries, in Hungary certain channels of getting along in life from the point of view of finance and position were already open even in that period. Families could create themselves relatively acceptable standards of living through doing extra work. It was allowed to have a house or a summer cottage of one's own built, to buy a car after three or four years being on the waiting-list, and to travel to the "West" in restricted periods. For these goods, families undertook to shoulder burdens beyond their strength, they sort of exploited themselves.

Because of the harmful effects of work on females, the weight of the burdens of the working place and the family, the marked degree of self-exploitation, and the increased environmental pollution, the risk factors exercising an unfavourable influence on the outcome of gravidity had become multiplied. The children of mothers exposed during their pregnancy to the negative effects of the slipshod urbanization and the disturbances in adaptation accompanying the increased mobility were given birth to with a lesser weight. Risk factors detrimental to health affected in different degrees the strata at the various grades of social hierarchy.

From the end of the 1970s on, social differences became especially marked, because more and more people had an opportunity to participate actively in the so-called second economy. There took place a significant polarization of incomes in the circle of those having boom trades and due to the financial success of sundry private enterprises. The accelerated inflation left stranded poverty-stricken people of an order of magnitude of a million, while there sprang up a narrow well-to-do stratum with outstanding opportunities of promoting their interests in the sphere of health care as well. The firm polarisation was manifest also in the rates of infant mortality, and kept increasing in every respect. The measure of inequality of chances between the fundamental strata was a multi-

ple of 1.4 from the 1950s to the beginning of the 1980s. It meant that a neonate of working and peasant origin had nearly one and a half times higher odds of infant mortality than those of neonates of a white-collar origin. The gap in the infant mortality of children in the upper and lower strata kept steadily widening. In 1990, the chances to survive of a child born to the family of a white-collar worker were twofold as compared with those of the offspring of a blue-collar worker (*Table 2*).

As far as the educational qualification of mothers is concerned, there has taken place an even more marked process of differentiation in the past years. According to *Table 3*,

Table 2. Formation of Deaths in infancy according to the social stratifications of providers
(Reference: Demographic Yearbook, 1990, Budapest, KSH)

Strata	Death under one per 1000 live births			
	1960	1970	1980	1990
Peasantry	48.9	34.6	26.2	18.7
Working class	49.1	38.8	23.9	15.5
Intelligentsia	36.1	28.4	18.7	9.1
Measure of inequality of chances	1.4	1.4	1.4	2.1

Table 3. Formation of deaths in infancy according to educational qualification of mothers. Deaths under one year per 1000 infants born to mothers with suitable educational qualification [References: Szalai J 1986; Közgazdasági és Jogi Könyvkiadó (Publishing House of Economy and Law) Demographic Yearbook, 1989, Budapest, KSH]

Year	Number of grades completed by mothers				Average	Measure of inequality of chances (1/4)
	— 8 (1)	8 (2)	9 — 12 (3)	13 — (4)		
1965	42.5	39.3	31.6	26.9	38.8	1.6
1980	42.0	25.0	18.0	16.2	23.2	2.6
1989	33.0	17.8	12.4	9.2	15.7	3.6

today a new-born child of a mother having further education after the secondary school has a three-and-a-half times higher odds for survival comparing with one of a mother having less than the obligatory 8 classes at the elementary school. The educational qualification of a mother influences the customs of family planning, the method of birth control, the warding off of factors endangering health, and the taking advantage of prenatal care. According to the findings of researchers dealing with the issue of premature births, the higher the educational qualification of the mother the lower is the number of underweight births. Among those without even an eight-grade school certificate, the rate of premature births is twice as high as in the group of mothers who pursued higher studies after secondary school graduation (Schuler – Klinger 1988). The excess in the mortality of the infants of mothers with lower level of schooling is the consequence of not only the

premature-birth issue, but it can also be traced back to the unfavourable surroundings and social milieu awaiting the infant after its birth. The experience of professional bears witness the fact that mothers with a higher level of education are much more willing to breast-feed their infants than those with a lower level of education are. The hygienic skill of more highly educated mothers also influences the level of their infant care, how quickly they can recognize disorders indicative of pathological changes, which is a pre-condition to the soonest possible medical attendance.

The pattern of the regional inequality of infant mortality had also undergone changes in the past decades. In the first half of the century, infant mortality in towns was significantly more favourable than in villages unprotected by organized child care. Up to 1960 the rate of infant mortality was the most favourable in Budapest, with towns as runners-up, then villages, that is, the rates got formed in accordance with the settlement hierarchy. Infant mortality rates measured against types of settlement approached each other during the 1950s, and there set in a levelling by 1960. At the beginning of the 1960s, infant mortality in towns was the first to drop below in Budapest and by 1965 villages also showed a lower rate than the one in the capital. Lasting from the middle of the 1960s to that of the 1980s, the high rate of infant mortality in Budapest was the consequence of the extraordinarily high frequency of underweight neonates, and at the same time it directed attention to the various kinds of urbanizational harm detrimental to the foetus. From the ever improving values over the past years in the capital, it can be inferred that a higher cultural level of townspeople and the essentially better conditions of health care are capable of counterbalancing the injurious effects of urbanization. After decades the first time in 1990, the rate of premature births in Budapest sank below the national average with the rate of infant mortality then being already much lower, so the rank of order again reflects the hierarchy of settlement (*Table 4*).

Table 4. Regional distribution of deaths in infancy according to weight at birth.
Deaths under one year per 1000 live births
(Reference: Demographic Yearbook, 1990, Budapest, KSH)

Regional units	Weight at birth (in grammes)			
	— 999	1000 — 1499	1500 — 1999	2000 — 2500
Budapest	745.9	263.7	50.8	24.4
Towns	807.5	370.0	85.8	29.3
Villages	849.3	371.5	84.3	30.8
Total	812.5	352.1	79.2	29.3

The same applied to the time when infant mortality in Budapest considerably surpassed the national average. The trend began to grow especially significant from the middle of the 1970s on, when Perinatal Intensive Centres were set up in several hospitals in the capital and in a few large towns, creating the conditions of high-quality care of neonates. The rate of survival considerably improved among the inmates of the well equipped neonates wards streamlined according to Western models and staffed with highly qualified medical and nursing specialists. The 200‰ rate of mortality of the prematurely born has been successfully decreased to half the number by these days. The

setting up the Centres has increased not only regional but also social inequality. Experience shows that women doing physical work, or living in rural areas are less likely to be delivered of their children in hospitals or clinics provided with Perinatal Intensive Centres. Due to the difficulties in transporting neonates from place to place, it would be desirable that endangered gravid women should give birth to their children in such institutions.

The strengthening social polarization of infant mortality experienced at the end of the 1980s is a new proof of the fact that the change in the social order (Which from the point of view of sociology started as early as the beginning, or middle, of the 1980s) has produced winners and losers alike. The slowly improving infant mortality of the past decades originates from the more favourable morbidity and mortality conditions of the strata better off in every respect. The rate of infant mortality of the children of the endangered strata (blue-collar workers, the poorly educated, those living at small localities, the poor) continues more and more to lag behind the average and the norms in Europe.

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Paper presented at the Conference of the Pediatric-Anthropological Subsection of the Anthropological Section, Hungarian Biological Society, Debrecen, Hungary, May 1992. — Received 7 August, 1992.

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