

Life Expectancy in Northwestern Transylvania Latter Half of the 19th Century– Beginning of the 20th Century

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Throughout the latter half of the 19th century and at the beginning of the 20th century, infantile death rate was high.

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OUR SURVEY on life expectancy is structured as an investigation resembling the classical historical demography, without neglecting, however, the particularities and specific features of the phenomenon. Thus, our attention remained focused on connected interdisciplinary fields. We sought to identify certain connections between life expectancy and lifestyle in the area and some elements relating to mortality.

The Evolution of Mortality in the Counties of Bihor and Sătmar

IN ORDER to determine the gross death rate (the ratio between the number of deaths and the average population in a year)¹ and mortality in general, we have used information provided by official statistics and a selected sample of parish registers (registers of deaths) drawn up by (parish) priests

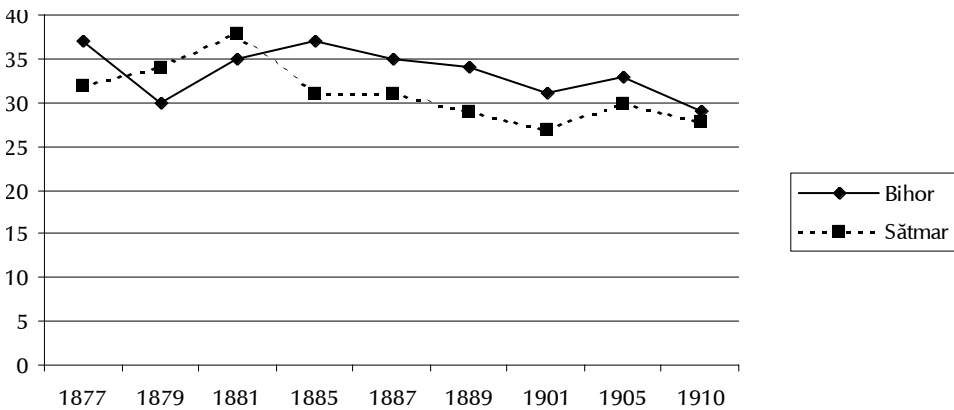
(the Greek-Catholic parishes of Abrămuț, Aușeu, Beiuș, Borod and Ghenci, and the the Protestant parish of Ghenci).

In 1866–1870 in Bihor (Bihar) County we notice an uneven evolution of deaths. In 1866, 13,885 people died in the county (7,331 men and 6,544 women). The following year, the number of deaths increased to 15,525, of which 8,006 were men and 7,519 were women. One year later, in 1868, the number of deaths decreased to 14,941 (7,762 men and 7,179 women). The descending trend was preserved in 1869, when 14,239 deaths were recorded (7,619 men and 6,620 women). The decreasing number of deaths in 1868–1869 was followed by a slight increase in 1870 (15,005 deaths—7,958 men and 7,047 women).²

A fairly similar evolution can be seen in the case of Sătmar (Szatmár) County. If in 1866, 8,555 persons died (4,427 men and 4,128 women), the following year their number increased to 9,216 persons (4,914 men and 4,302 women). The number of deaths increased in the county in 1868, when 10,149 persons died (5,166 men and 4,983 women). In 1869, the number of deaths decreased to 9,344 (4,924 men and 4,420 women). In 1870, the number of deaths grew to 10,433 (5,454 men and 4,979 women).³

Comparatively, in the two counties, death rates were somewhat similar. However, there were a few differences in the evolution in the two counties due to regional elements.

FIG. 1. MORTALITY IN THE COUNTIES OF BIHOR AND SĂTMAR^a



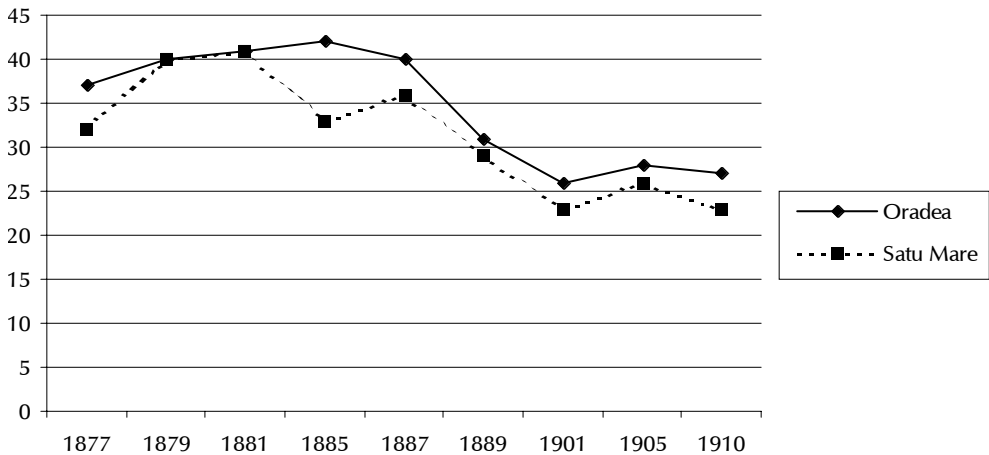
a. For 1901, 1905 and 1910, only deaths on the current Romanian territory are included.

In 1877–1910, the raw mortality index exceeded the figures recorded in Transylvania. If in the former Principality, in 1876–1910, the average death rate was 28.86%,⁴ in the two counties the average death rate in this period was 33.3% in Bihor and 31.09% in Sătmar.

The significant difference between average figures in the counties of the Principality as well as the average in Bihor and Sătmar identifies some micro-regions where mortality was much higher than the average for the whole region. On the whole, the death rate was higher in Bihor. Except for two years (1879 and 1881), when the death rate was higher in Sătmar, the higher death rate was the one in Bihor.

The death rate tended to decrease over time (considering the short duration and period) in both counties.⁵ Moreover, for the analyzed period, we notice that the death rate in the two counties was almost similar and closer to the average in the counties of Transylvania. Such trends can be caused by the remarkable developments in medical care; thus, untimely deaths were met increasingly seldom. The obvious decrease in death rates in the two counties was due to the obvious progress made in Oradea and Satu Mare.

FIG. 2. MORTALITY IN ORADEA AND SATU MARE



Comparatively, the death rate in the two cities followed the county trends. The higher death rate in Oradea was equaled by Satu Mare in only two years (1879 and 1881), when the death rate was higher in Sătmar County. The significantly diminishing death rate was due to the increasing number of inhabitants of the two cities due to immigration, combined with the general decrease in the death rate. Many young people⁶ looking for a job settled in the two cities. The population increased more than the death rate; consequently, we witness an artificial decrease in the latter. Also, the growing population of the two cities also had to do with the constantly high birth rate. The political, socio-economic, cultural, religious or mental context must also be considered in this survey. Certain ethnic or religious groups evolved differently, even from the demographic point of view:⁷ the

Romanian inhabitants of the Transylvanian cities, for instance, had the lowest birth rate among all ethnic groups.⁸ Such an association can be made from the point of view of the analysis of life expectancy or of the natural growth rate.

The Structure of Mortality. Life Expectancy and Cause of Death

LIFE EXPECTANCY at birth or in middle age was tightly connected to the mortality structure. Major mortality crises in certain years greatly reduced life expectancy in the area. High death rates influencing all age groups led to a considerable decrease in the average age. From the point of view of life expectancy in the whole region, there was a genuinely positive revolution. Death rates in the region as well as in Transylvania and Hungary greatly decreased, thus leading to the demographic pattern specific to Central and Western Europe at that time. In the '70s, under the effect of a deep economic crisis in the region and of the devastating cholera epidemic of 1872–1873, with negative effects until 1880, life expectancy in Transylvania was of only 27 years.⁹ However, towards the end of the 19th century, under the positive effect of a decreasing death rate, average life expectancy in Transylvania and Hungary reached 38.2 years. At the same time, in Romania, according to the mortality tables for 1899–1901 calculated by M. Sanielevici, life expectancy was 36.4 years.¹⁰ During all that time, in the developed countries of Western Europe life expectancy reached 48–54 years.¹¹

Life Expectancy by Gender

FROM THE point of view of gender distribution, women's life expectancy was higher than that of men by 1–2 years. This had to do with a higher male death rate. We notice certain symmetry in this regard between the higher birth and death rate for men. When approaching the topic of "male over-death," Ioan Bolovan spoke about "compensation" by the natural dynamics of population, that is, by birth.

The high male death rate was also obvious in the studied cases. Thus, in the Greek-Catholic parish of Abrămuș, of the total number of deaths, 193 were male (52.73%) and 173 were female (47.27%).¹² In the Greek-Catholic parish of Borod, 597 individuals died in the period studied by us, out of which 290 were women (48.6%) and 307 were men (51.4%). In the Greek-Catholic parish of Beiuș,

out of the total number of deaths, 290 were female (48.6%) and 307 were male (51.4%). Thus, alongside the Hungarian censuses and statistics, the case studies support the theory of the high death rate among men.

We can thus confirm that male life expectancy was lower than that of women by up to two years. The phenomenon was largely due to male over-mortality. On the current territory of Satu Mare County for instance, although the number of male births was greater, in 1900 the number of women living in the area (124,188) was higher than that of men (121,667).¹³ This reality, together with the fact that in Bihor the number of women was not high, although it was close to that of men, highlights a higher male death rate than in Bihor. What could be the reasons for this high male death rate? It is difficult to find the reasons in times of peace.¹⁴ Several specialists mention premature exhaustion, exposure to diseases because of the high mobility of men, accidents caused by hard physical labor, alcohol abuse or other excesses, etc. All these undeniable reasons are also associated with a lower immunity among male firstborns (there was a higher death rate among male newborn babies).¹⁵

Deaths by Age Group

OF SPECIAL relevance in establishing life expectancy in a region is the *distribution of deaths by age group*. Indeed, an investigation of all inhabitants in a community may help identify an average death age, practically what most analysts call life expectancy.

As we can see in the tables below, the highest death rate was among children. The number of children dying before reaching the age of 1 and infantile mortality (calculated as a ratio between the number of deceased children aged under 1 and the number of living newborn babies in a year) together with the high death rate with children aged 1 to 5 show that “the young age group was dominant” in mortality analyses.¹⁶ Children were the most exposed to the pressure of internal and external factors leading to death. Children were the most vulnerable to death in all seasons and in all communities. This applied to the whole of Transylvania.¹⁷ In 1865, 40.8% of deaths were among children under 5, while in 1885 the percentage was 47.3% and in 1895, 46.6%.¹⁸ The high death rate among children made some researchers speak of a “huge amount of chance” conditioning the survival of children “at least until widespread developments occurred in medicine and until the mental resistance to them began to weaken.”¹⁹

In the Greek-Catholic parish of Abrămuț, the parish registers of 1860–1880 confirm the fact that the number and percentage of dead children was extremely high. 25.41% (93 cases) of the 366 deaths were children under 1 year of age.²⁰ At the same time, the dead children aged 1 to 5 accounted for 22.4% of the total.

Comparatively, the two age groups were followed by other two groups (21 to 30 and 31 to 40) cumulating almost 20%. The great number of deaths in these groups following “accidents” occurred during the first years (which might turn into a rule or into normality, given their high number) leads us to believe that this was the usual age of death with those surviving childhood. Only eight people managed to live for more than 70 years. Also, nobody in the parish lived for more than 80 years.²¹

TABLE 1. DISTRIBUTION OF DEATHS BY AGE GROUP IN THE GREEK-CATHOLIC PARISH OF ABRĂMUȚ (1860–1880)

Age at death	Number of cases	Percentage (%)	Cumulated percentage (%)
Under 1	93	25.41	25.41
1–5 years	82	22.40	47.81
6–10 years	26	7.10	54.92
11–20 years	13	3.55	58.47
21–30 years	37	10.11	68.58
31–40 years	34	9.29	77.87
41–50 years	26	7.10	84.97
51–60 years	32	8.74	93.72
61–70 years	15	4.10	97.81
71–80 years	8	2.19	100.00
Over 81	0	0.00	100.00
TOTAL	366	100	

SOURCE: ANDJIB, *Colecția Registrelor de Stare Civilă*, file 7, f. 37–55.

Life expectancy or the average age at death in the parish was 20.24 in 1860–1880. At the same time, the average age (when 50% of the people died) was 6.5 years. Practically, as seen in the table above, 47.81% died before reaching the age of 5.

Somehow surprisingly, in the Beiuș Greek-Catholic parish there was an even higher death rate among children before reaching the age of 1 (24.16%). Together with the percentage of children dying between 1 and 5 years of age, the percentage of children dying before the age of 6 increased to 38.93% of all deaths in the parish in 1860–1880.

The pre-urban character of the place, associated with a significant increase in non-agricultural activities and in the standard of living, did not result in a diminishing death rate. Moreover, the infantile death rate index was still very high. Following the same trend, we also notice that only one person out of the 596 dying at the time (whose age could be determined) was over 80 years of age.²²

This reality translates into a determination of the life expectancy in the community (only 25.42 years). Moreover, average age was only 18. Thus, only 50% of the deceased managed to live for more than 18 years. From the point of view of the two indices, we can see that, despite an economic development superior to that in other places, the expected increase in life expectancy was

not confirmed. Most of the Greek-Catholic community was far from experiencing these beneficial changes.

TABLE 2. DISTRIBUTION OF DEATHS IN THE BEIUȘ GREEK-CATHOLIC PARISH BY AGE GROUP (1860–1880)^a

Age at death	Number of cases	Percentage (%)	Cumulated percentage (%)
Under 1	144	24.16	24.16
1–5 years	88	14.77	38.93
6–10 years	27	4.53	43.46
11–20 years	48	8.05	51.51
21–30 years	50	8.39	59.90
31–40 years	54	9.06	68.96
41–50 years	66	11.07	80.03
51–60 years	56	9.40	89.43
61–70 years	39	6.54	95.97
71–80 years	23	3.86	99.83
Over 81	1	0.17	100.00
TOTAL	596	100	

SOURCE: ANDJIB, *Colecția Registrelor de Stare Civilă*, file 94, f. 25-49.

a. The Greek-Catholic parish priest did not record age at death for one person.

In the Greek-Catholic parish of Borod there was the same vulnerability of the age group under 5 years of age, particularly for newborn babies under 1. Poor nutrition, the lack of efficient medical care, traditionalism and conservatism in treating children's illnesses, the disregard for personal hygiene, etc. were but a few of the causes behind the high death rate among children.²³ Out of 1,012 deaths, 219 were of children aged under 1 year of (21.64% of all deaths), while 159 were of children aged 1 to 5 (15.71% of all deaths).²⁴

Greek-Catholic population's life expectancy in Borod was much higher than in other parishes. Thus, average age at death or average life expectancy was 28.53 years, which is much higher than average life expectancy in Transylvania. In fact, if we analyze death by age groups, we notice that 158 people representing 15.61% of the deceased were over 60 years of age. Of them, 20 were even over 80 years of age.²⁵

The distribution of deaths by age groups shows an excessively high mortality among children in Ghenci, in Satu Mare County.²⁶ There, average age was merely 4 in the case of the Greek-Catholic community and a little higher, we may say, in the case of the Protestant community. How was it possible that half of the people dying in the Greek-Catholic parish did not reach the age of 5? How was it possible that only half of the 604 Greek-Catholics dying in 1863–1910 reached the age of 4? Although a little better, the situation of the Protestant parish reflects the same cruel reality: only few children managed to reach the age of 10. Out of the total number of deceased people, only 38.58% of Greek-Catholics and 46% of Protestants lived for more than 11 years.

TABLE 3. DISTRIBUTION OF DEATHS BY AGE GROUPS IN THE BOROD GREEK-CATHOLIC PARISH (1860–1880)

Age at death	Number of cases	Percentage (%)	Cumulated percentage (%)
Under 1	219	21.64	21.64
1–5 years	159	15.71	37.35
6–10 years	42	4.15	41.50
11–20 years	57	5.63	47.13
21–30 years	88	8.70	55.83
31–40 years	101	9.98	65.81
41–50 years	91	8.99	74.80
51–60 years	97	9.58	84.39
61–70 years	91	8.99	93.38
71–80 years	47	4.64	98.02
Over 81	20	1.98	100.00
TOTAL	1,012	100	

SOURCE: ANDJB, *Colecția Registrelor de Stare Civilă*, file 144, f. 160-164; file 146, f. 1-47.

The terrible reality and the fact that 36.42% of the deceased Greek-Catholics died before reaching the age of 1 (in the case of the Protestants, 33.87% of the deceased people were children) was undoubtedly caused by the great death rate among children. For many years, even towards the end of the period analyzed by us, more than half of the deceased children were younger than 1.

TABLE 4. DISTRIBUTION OF DEATHS BY AGE GROUPS IN GHENCI (1863–1910)

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SOURCES: ANDJSM, *Colecția Registrelor de Stare Civilă*, files 655–657, passim; Chereji, 50–53.

Traditionalism and the strong influence of the former demographic regime are reflected in the recorded life expectancy: 20.52 years in the case of the Greek-Catholic parish and 23.52 in the case of the Protestant parish. The conclusion

is that, despite an obviously diminishing death rate, there were several years when there were critical mortality crises, with multiplying vulnerability effects on the community. The uneven development in the number of deaths from one year to another is a case in point.

Infantile Mortality—An Indicator of Life Expectancy

TIGHTLY RELATED to the distribution of deaths by age groups is the analysis of infantile mortality. In spite of obvious advances as compared to 1860–1880, in 1910 we still find a high death rate among children. In Bihor, 34.2% of all children died before the age of 5 and 36.3% died before the age of 7.²⁷ In Sătmar County, mortality among children was even higher, as indicated by the great number of deceased children in Ghenci: 36.3% of all children died before the age of 5, while 38.4% died before the age of 7, in 1910.²⁸

In 1900–1910, the average number of newborn babies was 17,547 in Bihor and 9,655 in Sătmar.²⁹ In the same period, the annual average of deceased children in Bihor was 4,094 and in Sătmar it stood at 2,198. If we factor in the average number of deceased children under 1 and the average number of newborn babies in 1900–1910, we conclude that the average infantile death rate was 232.95‰ in Bihor and 227.65‰ in Sătmar. Thus, we can say that there was a very high infantile death rate in both counties. It exceeded the average infantile death rate for Transylvania, which stood at 206.24‰.³⁰ Despite the generally high infantile death rate, there were counties where the infantile death rate index was even higher; for instance, in Arad infantile death rate was 245.56‰.³¹ In the two county seats, the average infantile death rate for 1900–1910 was lower as compared to the average for Transylvania.³² In Oradea, infantile death rate was 213.25‰ and in Satu Mare it was 219.98‰.³³

The analysis of villages shows surprising infantile death rate variations from one case to another, as well as the fact that the rate in some villages was much lower than the county average or that in the county seats. According to the parish register for 1860–1880, in the Abrămuț Greek-Catholic parish, 25.41% (93 cases) of the 366 who died were children under 1.³⁴ Thus, 93 of the 339 children born in the parish³⁵ died before turning 1. Somehow surprisingly, in the Beiuș Greek-Catholic parish there was a higher death rate in the case of children under 1 (24.16%).³⁶ Of the 480 children born in 1860–1880,³⁷ 144 died before turning 1, which means an average infantile death rate (300‰) much higher than the rate for Bihor. In the Borod Greek-Catholic parish, we notice the same vulnerability of the age groups under 5, particularly with the babies under 1 year of age. Out of the 1,012 deaths, 219 were of children aged less than 1

(21.64% of all deaths).³⁸ Compared to the number of 849 children born in the parish,³⁹ the average infantile death rate was 257.95‰ for the period 1860–1880. Also shocking for the age group distribution of deaths and revealing an excessively high death rate among children is the cruel reality seen in Ghenci.⁴⁰ In 1863–1910, 36.42% of the deceased Greek-Catholics died before turning 1 (33.87% of all deceased Protestants were children under 1). As compared to the number of newborn babies (839 in Greek-Catholic families and 1,546 in Protestant families), the average infantile death rate was 223.48‰ (262.21‰ in the Greek-Catholic parish and 202.45‰ in the Protestant parish).

This was a world where many were born and many died. Children were the most vulnerable to social and economic hardships and to inclement weather. Throughout the latter half of the 19th century and at the beginning of the 20th century, infantile death rate was high. Moreover, as seen in the Principality of Transylvania,⁴¹ the infantile death rate even increased in some regions. There were several complex causes behind this high infantile mortality. They originated in the precarious living conditions, the insufficient or inappropriate food, the lack of hygiene and of qualified medical staff, the inappropriate housing for newborn babies, the lack of special care for small children and, last but not least, the attempt of applying traditional adult medical “treatments” to children, etc. Many children died at birth or immediately after. The lack of qualified and specialized midwives to assist the mother in childbirth and provide some medical assistance to the child was another important cause of infantile mortality. The want for midwives was noticed even at the time. In 1876, the vice-count of Arad asked the eparchy Consistory to educate the people, pointing out that “the disproportionate number of deaths among newborn babies is caused by harmful practices, as the people use unspecialized and unqualified midwives.”⁴² Last but not least, the high infantile death rate originated in a harmful collective mentality of the people concerning physicians and the healthcare system.

Regional Mortality Crises and Their Influence on Life Expectancy

THE DEEP economic crises affecting the empire in the '70s and various epidemics (particularly the lengthy cholera epidemic of 1872–1873) translated into considerable demographic pressure. The cholera epidemic of 1872–1873 had catastrophic effects: in Bihor County, 30,447 people became ill and 10,980 of them died (1,096 in Oradea only), which meant 2.28% of the county inhabitants; in Sătmar, 17,330 people became ill and 5,268 of them died, which meant 2.13% of the county inhabitants.⁴³ The period with a great death rate in the region was followed by a short respite (ending around 1880,

as seen in the charts). The trends at the regional level were often contradicted by case studies on localities or micro-regions. The analysis of parish registers identified a period (different from the trends manifest at regional level) when the death rate was very high. In certain years, diphtheria, smallpox, malaria and other epidemics blighted several villages and their effects were even worse than those of the cholera of 1872–1873. This is an indicator of the precarious situation of medical care in the rural areas.⁴⁴ In the Beiuș Greek-Catholic parish, for instance, in 1872 there were no deaths caused by cholera.⁴⁵ The following year however, the terrible epidemic resulted in 15 deaths in the parish.⁴⁶

The abovementioned cholera epidemic was not the only reason behind the high death rate of that time. In the Borod Greek-Catholic parish, 19 people died of cholera in 1866 (in October, 17 people died of the disease).⁴⁷ In 1863, 12 people died of dysentery and 12 of tuberculosis.⁴⁸ In 1869, 18 people died of malaria (14 in March–April and 4 in August). Another 8 people died of pneumonia.⁴⁹ Because of the *ague* (possibly malaria), 19 people died in 1871 and 12 other people died the following year.⁵⁰ These are but a few examples of the numerous diseases we could classify as epidemics due to their devastating effects. In 1874, a year with several outbreaks, in the Beiuș Greek-Catholic parish 11 people died of “smallpox,” a contagious disease, which confirms the vulnerability of the medical system.⁵¹

To all this we may add the socio-economic crises that accompanied the families’ torment caused by the numerous deaths. There were many widows, and many children had no parents; with the death of the head of the family, they all lost their source of social and material support. Thus, we see a long and complex range of causes outlining the bleak periods with an excessively high death rate. Besides diseases and the daily wants and needs, precarious hygiene and living conditions largely contributed to this increased death rate and decreasing life expectancy. Considering the socio-economic vulnerability and the community in general, several deaths occurred either directly or indirectly because bodies were weakened by the inclement weather. Long winters, hot summers, long rains, droughts, etc., could be strong external factors increasing the death rate among the inhabitants of these villages, vulnerable and devoid of support.

Life Expectancy and Seasonal Vulnerability to Death

IF WE make a comparison with the situation in Transylvania, where most deaths occurred in winter and in spring (11% in March and 6.5% in June–July),⁵² there were certain small variations. In 1860–1880, in the analyzed parishes, the average monthly number of deaths confirms the high death rate

for March–April (22.3%) and October–November (16.93%). Although there was a slight decrease in the number of deaths at the beginning of winter (December), the number of deaths was still high. The lowest number of deaths was in May–September, as well as in February. The seasonal distribution of deaths confirms the challenging nature of spring, when the body was weaker and food was in short supply, to say nothing about the exhausting spring agricultural labor. Physical exhaustion towards the end of the agricultural season and the change in air temperature in October–December favored the spread of several diseases that often led to death.

If we analyze the whole range of external determinations and conditions favoring the increase in death rate from one month to another and from one season to another, we notice the high variety of trends manifest throughout the year. The cold air in wintertime associated with labor in the woods could lead to lung disease. The lack of appropriate food and exhausting toil in spring—as well as the fact that both parents would go to work in the fields and thus several children would remain in the care of crippled old people or of their brothers—also led to a high death rate in the months of spring. The high death rate also originated in the spreading of several diseases, once the air became warmer and most of the people were weaker. In summer and autumn, several people—mostly children—died because of stomach diseases caused by eating too much unripe and unwashed fruit and vegetables. Dysentery and typhoid fever were widespread in summer and autumn. To these we have to add the lack of care for children. Last but not least, the meagre vegetarian diet observed during fasting periods (in many cases, they did not have even that) further weakened the body; hence the increasing death rate after long fasting periods. □

Notes

1. Ioan Bolovan, *Transilvania între Revoluția de la 1848 și Unirea din 1918: Contribuții demografice* (Cluj-Napoca, 2000), 117; Fernand Braudel, *Structurile cotidianului*, trans., vol. I (Bucharest: 1984), 145.
2. Iosif I. Adam and I. Pușcaș, *Izvoare de demografie istorică*, vol. 2, *Secolul al XIX-lea–1914: Transilvania* (Bucharest, 1987), 240.
3. *Ibid.*, 241.
4. Cf. Bolovan, 145.
5. During the entire second half of the 19th century, the gross death rate was pretty high. Beyond the average rate, there were peaks of mortality culminating in the devastating cholera epidemic affecting the whole region. Moreover, 1870–1874 was a time with the highest gross death rate in both counties: 58.6‰ in Bihor and 46‰ in Sătmar. Adriana Florica Muntean, “Mortalitate și morbiditate în nord-vestul

- Transilvaniei (în a doua jumătate a secolului al XIX-lea și la începutul secolului al XX-lea),” in *Transilvania în epocile modernă și contemporană: Studii de demografie istorică*, ed. Ioan Bolovan (Cluj-Napoca, 2002), 205.
6. Newcomers’ death rate normally was lower, as those usually involved in migration belonged to the age group less exposed to mortality, unlike children and old people.
 7. For instance, the growth of the Jewish population in cities and other localities is quite significant. See Ladislau Gyémánt, “Les Juifs de Transylvanie à l’Époque du dualisme (1867–1918),” *Transylvanian Review* 18, 2 (Summer 2009): 44–48.
 8. Ioan Bolovan and Sorina Paula Bolovan, “Transylvania until World War I: Demographic Opportunities and Vulnerabilities (II),” *Transylvanian Review* 18, 2 (Summer 2009): 140.
 9. Bolovan, 149; Simion Retegan, “Realități demografice ale satului românesc din Transilvania la mijlocul sec. al XIX-lea (Solnocul Inferior),” in *Civilizație medievală și modernă românească*, eds. N. Edroiu, A. Răduțiu, and P. Teodor (Cluj-Napoca, 1985), 169.
 10. Apud Cornelia Mureșan, *Evoluția demografică a României: Tendințe vechi, schimbări recente, perspective (1870–2030)* (Cluj-Napoca, 1999), 75.
 11. Bolovan, 149.
 12. Arhivele Naționale, Direcția Județeană Bihor (National Archives, Bihor County Division), *Colecția Registrelor de Stare Civilă* (Marital Records Collection), file 7, f. 37–55 (hereafter cited as ANDJB).
 13. Traian Rotariu, ed., *Recensământul din 1900: Transilvania* (Cluj-Napoca, 1999), 618.
 14. At the time of military conflicts, there was an increasing number of deceased people (mainly men). For instance, during the revolutionary events of 1848–1849 in Transylvania, according to some Romanian historians, about 40,000 Romanians died. See Ioan Bolovan and Sorina Paula Bolovan, “Transylvania until World War I: Demographic Opportunities and Vulnerabilities (I),” *Transylvanian Review* 18, 4 (Winter 2009): 37.
 15. In the Borod Greek-Catholic parish, for instance, out of the 219 children that died before turning 1, 130 were boys (59.36%) (ANDJB, *Colecția Registrelor de Stare Civilă*, file 144, f. 160-164; file 146, f. 1–47). The same situation existed in the Aușeu Greek-Catholic parish, where 37 (54.41%) of the 68 deceased children were boys (ibid., file 71, f. 40-51). Out of the 93 children deceased before turning 1 in the Abrămuș Greek-Catholic parish, 56 (60.2%) were boys (ibid., file 7, f. 37–55). In the Beiuș Greek-Catholic parish instead, only 49.3% of the deceased children were boys (71 out of 144). The relation changed to the disadvantage of boys in the community when calculating the number of deceased children under 2: out of the 175 children that died before reaching the age of 2, 89 were boys (50.86%) and 86 were girls (49.14%) (ibid., file 94, f. 25–49).
 16. Luminița Dumănescu, *Transilvania copiilor: Dimensiunea demografică a copilăriei la românii ardeleni (1857–1910)* (Cluj-Napoca, 2006), 139.
 17. Daniela Deteșan, “Mortalitatea în comitatul Cluj în a doua jumătate a secolului al XIX-lea și începutul secolului XX—Evoluții demografice locale,” in *Transilvania în*

secolele XIX–XX: Studii de demografie istorică, eds. Sorina Paula Bolovan, Ioan Bolovan, and Corneliu Pădurean (Cluj-Napoca, 2005), 89–122.

18. Dumănescu, 136–137. In Cluj-Mănăștur, 57.5% of the deceased people were children under 5 and the infantile death rate for 1855–1904 was 354.2‰, much higher than the average in Transylvania (193‰) for the first decade of the 20th century.
19. *Ibid.*, 85.
20. ANDJB, *Colecția Registrelor de Stare Civilă*, file 7, 37–55.
21. If we continue the comparison with the Protestant parish, we point out that 17.01% (25) out of the 147 deceased people at the time were children under 1. At the same time, 21.09% of the total number of deceased people were children under 5. Comparatively, the two age groups were followed by other two groups (41–50 and 51–60) reaching 25%. Thus, there was a significant difference between the two parishes.
22. ANDJB, *Colecția Registrelor de Stare Civilă*, file 94, f. 25–49.
23. Corneliu Pădurean, *Populația comitatului Arad în secolul al XIX-lea* (Arad, 2003), 194.
24. ANDJB, *Colecția Registrelor de Stare Civilă*, file 144, f. 160–164.
25. *Ibid.*, file 144, f. 160–164; file 146, f. 1–47.
26. Arhivele Naționale, Direcția Județeană Satu Mare (hereafter cited as ANDJSM), *Colecția Registrelor de Stare Civilă*, files 655–657; Camelia Chereji, “Familia în satul românesc din nord-vestul Transilvaniei. Studiu de caz: satul Ghenci din comitatul Satu Mare 1863–1918,” dissertation thesis (Oradea, 2000), 50–53.
27. Adam and Pușcaș, 645. Somehow paradoxically, the death rate in the case of children under 5 (36.1% of all newborn babies) and 7 (37.3% of total newborn babies) was even higher in Oradea the same year. At a first glance, the high death rate among children in the city is quite surprising. (Considering that the city was experiencing the first signs of economic development and the standard of living was consequently higher. There was a better developed and efficient medical system. This proved that in the city infantile death rate was lower than in the rest of the country—only 36.7% out of the total number of people deceased in Oradea were under 5. In the county, the percentage reached 51.6%.) Yet in the city there were more social and economic factors at work than just economic development. The high density of people in one place could increase the negative effects of local epidemics and generally trigger high mortality peaks. In this situation, if our hypothesis proves true, the death rate among children in the city fluctuated even more from one year to another (depending on the presence and force of determining factors) and from one city to another.
28. *Ibid.* In this county (in 1910!), child death rate was higher in the countryside. In Satu Mare, 34.5% of the total newborn babies were children under 5 (46.7% of the total number of deaths) and 35.7% were children under 7 (35.7% of the total number of deaths).
29. *Ibid.*, p. 656–659; *Magyar Statisztikai Közlemények*, new ser., vol. 46, *A Magyar Szent Korona Országainak 1901–1910: Évi Népmozgalma Községenkint* (Budapest, 1913), 280–459.

30. We have considered all localities in Transylvania belonging to current Romania, including Banat, Crișana and Maramureș, where the average number of births was 177,980 children in 1900–1910 and 36,707 died before turning 1. Cf. Adam and Pușcaș, 660–661.
31. *Ibid.*, p. 656–657. The infantile death rate in the county was higher than the average for Transylvania and Hungary, as noted by Prof. Pădurean in his analysis of the county's population. According to his survey, infantile death rate for children under 5 was 475.6‰ in 1893. Pădurean, 192.
32. This explains the high variation from one year to another as compared to the rates of 1910 (see the abovementioned reference) and the vulnerability of children in cities, particularly in poor neighborhoods.
33. Adam and Pușcaș, 656–659. The high infantile death rate in Satu Mare (as compared to Oradea) was accompanied by a high birth rate. Thus, we consider that there was a tight connection between death rate and birth rate in a community. Numerous deaths naturally led to families' reactions favoring high birth rates.
34. ANDJB, *Colecția Registrelor de Stare Civilă*, file 7, f. 37–55.
35. *Ibid.*, f. 6–22.
36. *Ibid.*, file 94, f. 25–49.
37. *Ibid.*, file 91, f. 25–45.
38. *Ibid.*, file 144, f. 160–164; file 146, f. 1–47.
39. *Ibid.*, file 144, f. 49–99.
40. ANDJSM, *Colecția Registrelor de Stare Civilă*, files 655–657, *passim*; Chereji, 49–53.
41. Infantile death rate in Transylvania (without including Banat, Crișana and Maramureș) was 178.3‰ in 1865 and reached 193‰ in the first decade of the 20th century. Bolovan, 156.
42. *Apud* Pădurean, 194.
43. Adam and Pușcaș, 243–244.
44. Bolovan, 143.
45. ANDJB, *Colecția Registrelor de Stare Civilă*, file 94, f. 38–40.
46. *Ibid.*, f. 40–42.
47. *Ibid.*, file 146, f. 9–12. In 1872 there was no record of deaths caused by cholera, just like in the Beiuș parish. However, 19 deaths were caused by the terrible epidemic in the parish the following year.
48. *Ibid.*, f. 1–4.
49. *Ibid.*, f. 17–20.
50. *Ibid.*, f. 23–30.
51. *Ibid.*, file 94, f. 42–44.
52. Bolovan, 154.

Abstract

Life Expectancy in Northwestern Transylvania:
Latter Half of the 19th Century–Beginning of the 20th Century

Our research on life expectancy started from analyzing mortality in the counties of Bihor and Sătmar. We focused on different elements influencing the death rate. The frequent mortality crises and daily life in the countryside in Northwestern Transylvania resulted in a low life expectancy at the time. The differing life expectancy by gender was influenced by the communities' socio-economic and mental-cultural conditions at the time. There was also a considerable influence of meteorological conditions on life expectancy.

Keywords

life expectancy, death rate, parish, infantile mortality, death crisis, countryside