Infant mortality in interwar Budapest

Social, territorial, confessional and occupational aspects of the demographic transition in a multicultural metropolis

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Abstract

The interwar years were a significant period of the demographic transition with changing death and birth rates. Mortality decline affected also infant mortality. Besides being a demographic indicator, infant mortality may also serve as an indicator of a country's state of modernization as it is a result of many complex social, cultural and economic causes. Among the social determinants the effects of residency, available health care and the socio-economic position of families are investigated in the thesis. The multiethnic, multi-confessional population of Budapest was the focus of the analysis with a comparative perspective of Hungary. These data and their contribution to demographic development have not been well-researched before therefore new conclusions can be drawn about the social inequalities of the demographic transition in Hungary.

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INTRODUCTION

In 1916 Albert Apponyi delivered a speech in the Hungarian Parliament about population problems in the Kingdom of Hungary. He emphasized the severe situation of decreasing fertility rate and high rate of infant mortality. As opposed to other European countries, in Hungary there was no decrease in infant mortality rate which could have counterbalanced the lowering fertility rates. Albert Apponyi argued that infant mortality was not only a demographic question but a moral and economic one. Furthermore, he pointed out that decreasing infant mortality is a cultural development phenomenon, where ignorance can cause great harm. He called for state intervention through the foundation of an infant and mother care system.[1]

The interwar period represented a significant stage in the decline of infant mortality in Hungary. It was also the time of social reforms and the beginnings of institutionalized infant care. Previously the rate of infants who died before their first birthday was exceptionally high, while after the First World War a gradual decrease can be seen. Except for a few periods of regression due to epidemics, the decreasing tendency continued until the Second World War and also after it. Infant and mother care had become the centre of attention already in the beginning of the 20th century in Hungary due to the much worse infant mortality results compared to other countries in Europe. In Hungary between 1911 and 1924 the infant mortality rate was one of the worst among European countries with 19.8%, while in Western Europe this rate was under 14%, in Northern Europe under 9%.[2] Hungary was one of the first countries in Europe to introduce a law to protect and control the health condition of infants.

[1] *Az anya-és csecsemővédelem a képviselőházban*, gróf Apponyi Albert beszéde és Sándor János belügyminiszter válasza (Mother and Infant Care in Parliament, the Speech of Albert Apponyi and the Answer by János Sándor, Minister of the Interior), (Budapest: Pfeifer, 1916), 6-8.

[2] Éva Gárdos, Joubert Kálmán (eds.), "A csecsemőhalandóság és az anyai halálozások századunkban" (Infant and Mother Mortality in the 20th Century) in Tamás Faragó, Őri Péter (eds.), *A Központi Statisztikai Hivatal 2001. évi Történeti Demográfia Évkönyve*, 469.

From the 1920s the state had a greater role in improving health care and infant care. In order to institutionalize infant care the state provided qualification possibilities for midwives and founded organizations that had medical and social roles, like the *Stefánia* Association and the *Zöldkeresztes* health visitor movement.

In the first year of life, newborns experienced extremely high death risks as a result of many complex causes, such as social, cultural and economic issues, therefore infant mortality may serve as an indicator of a country's state of modernization. Amartya Sen underlines the role of individuals as active agents in changing economic, political and social circumstances and thus achieving development. His research concentrates mainly on the second half of the 20th century though his arguments concerning women's role in child care and infant mortality should be considered for the first half of the 20th century also.[3] He claims that demographic figures could express a country's stage of modernization better than economic output indicators. Based on examples of Asia and America he claims that having higher GNP does not necessarily guarantee higher life expectancy.[4] Furthermore, Sen states that improvement in education and health care are the most important constituents of development though they do not provide a direct contribution to the GNP.[5] Based on his argument it is relevant to investigate demographic tendencies and health care improvement in a country in order to draw conclusions about its state of modernization.

Besides Sen, other works have been published also recently, aiming at examining the role of demography in economic development. In 2007, Richard Grabowski considered demographic transition and fertility as significant factors in a country's economic growth and analyzed their effects in a historical perspective.[6] George Magnus published a book in 2009 about the relationship of demography and the changing global economy, emphasizing the

[3] Amartya Sen, *Development as Freedom* (New York: Alfred A. Knopf, 1999), xii-xiii.
[4] Ibid, 6.
[5] Ibid, 5.

mutual effect of demographic processes and globalization.[7] These examples show the recent interest in demography and population study in historical research.

The period under investigation falls in the crucial phase of the first demographic transition, a period characterized by significant changes in demographic patterns. A case study of infant mortality helps to investigate Hungary's position in European demographic development. The geographic location of the country also justifies the analysis as Hungary is situated in Central Europe. In demography East-West differentials are well-researched. Marek Okolski[8] argues for different mortality patterns in Eastern and Western Europe, while John Hajnal[9] argued for a dividing line in terms of marriage patterns. Belonging to a certain demographic pattern in Europe in terms of infant mortality is thus a relevant question for Hungary.

Demographic data will be analyzed in the framework of convergence theories and demographic transition models. In European demographic development convergence means that industrial nations are becoming more similar to each other in spite of the fact that their cultural, historical, political and economic circumstances and backgrounds are different. The theory of convergence is connected to modernization, industrial organization and social structure.[10] Convergence theories appeared in demography as well and became manifested in the models of demographic transitions and also in models concerning regional level demography.[11]

[6] Richard Grabowski, *Economic Development, a Regional, Institutional and Historical Approach* (Armonk, New York: M.E., 2007).
[7] George Magnus, *The Age of Aging: how Demographics are Changing the Global Economy and Our World?* (Singapore: Hoboken, N.J.: John Wiley and Sons, 2009).
[8] Marek Okolski, "East-West Mortality Differentials", in Alan Blum and Jean-Louis Rallu (eds.), *European Population II*., 165-189.
[9] John Hajnal, "European Marriage Patterns in Perspective" in D.V. Glass and D.E. Eversley (eds.), Population in History (London: Edward Arnold, 1965.), 101-143.
[10] Béla Tomka, "Demographic Diversity and Convergence in Europe, 1918-1990: The Hungarian Case," *Demographic Research* 6 (2002): 21.
[11] Ibid, 22.

Demographic patterns in 20th century Europe were part of a greater process called the first and second demographic transitions. Demographic transitions are important because all industrialised countries in Europe share a general pattern of convergence towards similar demographic patterns resulting in low death rates and low birth rates.[12] Besides this, demographic transitions are in the centre of attention because they created a phenomenon of ageing process and slow-down in population growth to which European societies are still trying to accommodate.[13]

In his work, *The European Population 1850-1945*, Peter Flora emphasises that unity and diversity are fundamental issues in relation to European societies. He claims that there has always been a tension between unity and diversity, which provided the unique dynamism of European societies. The author's main argument is that changes have occurred and spread to different directions in Europe, while finally every country would reach the same demographic pattern.[14] Hartmut Kaelble carried out the most systematic research on the problem of convergence. The starting point of Kaelble's thesis was that by the 1990s Western Europe had forged not only a political community, but the countries of Western Europe had formed a real, unified "European society". He based his statement on the assumption that European societies had experienced a special course of development that was different from the modernization model of the United States and Japan. In the 19th and 20th centuries a number of similar population patterns emerged in the European countries.[15] The third stage of convergence theories was conceptualized by Susan Cotts Watkins.[16] According to her research the diversity of demographic patterns decreased within countries between 1870 and

[12] David Coleman, (ed.), *Europe's Population in the 1990s* (Oxford University Press, 1996), IX.
[13] Ibid, IX.
[14] Franz Rothenbacker, "The European Population 1850-1945", in Peter Flora et al., (eds.), *The Societies of Europe* (London: Palgrave Macmillan, 2002.)
[15] Hartmut Kaelble, Jürgen Schriewer, (eds.), *Gesellschaften im Vergleich. Forschungen aus Sozial- und Geschichtswissenschaften* (Europäischer Verlag der Wissenschaften, 1999), 343.
[16] Susan Cotts Watkins, *From Provinces into Nations: The Demographic Integration of Europe 1870-1960*, (Princeton University Press, Princeton, New Jersey, 1991).

1960, along with the decreasing difference between urban and rural settings. She assigns great role to demographic behaviour as it is not solely based on private choice but depends on the national community that surrounds us.

The thesis examines the improvement of infant mortality figures in Hungary in the framework of these three convergence theories according to three aspects influencing the rate of infant mortality. Especially the third stage of convergence model will be elaborated through the concrete example of Hungary. The three aspects to be analysed represent three levels of analysis to explore the inequalities of infant survival. Firstly the determining rate of residency and territorial distribution will be examined, followed by the analysis of the available medical infrastructure in interwar Hungary. The third chapter deals with the socio-economic position of the Budapest population, such as profession of the father, denomination and legitimacy status of the children with an additional aspect of differences according to social layer.

The first chapter will be devoted to the analysis of the differences in infant mortality between urban and rural settings. According to Watkins, the convergence of rural and urban patterns is the last stage of demographic integration. First of all, data will be compiled to prove that these differences existed. For the urban side, the main reference will be Budapest which will be contrasted to data from the rest of Hungary. For the countryside data on the county and municipal levels will serve as an illustration. Moreover, works of contemporary demographers and physicians will be used to identify how they saw the determinants of infant mortality in towns and villages. The issues of nutrition, education, profession, infectious diseases are discussed in the articles by József Melly, Tivadar Szél, Jenő Rédei, Sándor Kovacsics, Ferenc Torday, Béla Johan, and Lajos Keller.

In the interwar period preventive infant care was institutionalized in Hungary. Development in medical care is closely related to demographic issues therefore in the second

chapter aspects of this improvement will be included also. From 1915 the *Stefánia Szövetség* introduced the nursing system in Hungarian towns. It helped infant and mother care from different approaches. Due to their propaganda activity, in the counties under their control the infant mortality rate began to decrease significantly. Parallel to them another association started to work, the movement of health visitors in villages, called *Zöldkeresztes* movement. Their existence proved to be the real break-through in infant care in villages. Besides them, another health visitor institution, the *Magyar Csecsemővédő Egyesület* (Hungarian Infant Care Association) was established in Hódmezővásárhely to help and complement the work of physicians. On the basis of their available publications, contemporary journals and archival sources it is possible to explore the beginnings of their work, the creation of these associations, the type of activities and their role in changing infant mortality rates.

Data analyzed in the third chapter and their contribution to demographic development has not yet been well-researched. The third chapter analyzes data collected from the Central Statistical Office about infant mortality rates in different confessional groups, and according to occupation and illegitimacy. Hungarian statistical yearbooks for counties and separate statistical yearbooks for Budapest edited by Lajos Illyefalvi give the opportunity to compare the infant mortality rates according to the above mentioned variables in Budapest and in the counties. Correlations of denomination, illegitimacy and death risks with modernization were researched by Viktor Karády therefore his studies will be used for the interpretation of the data.[17]

[17] Viktor Karády, "A halálozási kockázat egyes felekezeti összetevői Magyarországon a második világháború előtt és alatt" (Denominational Aspects of Death Risk n Hungary during and after the Second World War) in Kozma István, Papp Richárd (eds.), *Etnikai kölcsönhatások és konfliktusok a Kárpát-medencében* (Ethnic Interaction and Conflicts in the Carpathian Basin), (Budapest: Gondolat, 2003), 244-261. Viktor Karády, "Egyenlőtlen polgárosodás. A zsidóság modernizációjának különleges tényezői Magyarországon" (Unequal Enbourgeoisment. The Special Features of Jewish Modernization in Hungary) in Karátson Endre, Várdy Péter (eds.), *Változás és állandóság: tanulmányok a magyar polgári társadalomról* (Transformation and Stability: Studies of the Hungarian Modern Society), ([S.I.]: Hollandiai Mikes Kelemen Kör, 1989), 141-167. Viktor Karády, "Felekezetek és születéskorlátozás Budapesten (1880-1945). Népességszociológiai kísérlet." (Denomination and Birth-control in Budapest (1880-1945). A Study in Population Sociology.) in Elekes Zsuzsanna, Spéder Zsolt (eds.), *Törések és kötések a magyar társadalomban* (Disruptions and Junctions in

From the demographic analysis of these variables new conclusions can be drawn about demographic development in interwar Hungary with a significant impact on infant mortality rate. Infant mortality rate was the result of a variety of social phenomena therefore the analysis of social circumstances will also contribute to the knowledge of the state of modernization in Hungary and will help to locate Hungary among the European models of demographic transitions.

Hungarian Society), (Budapest: Századvég, 2000), 375-388. Viktor Karády, "Felekezet, cselédsors és szexuális deviancia az 1945 előtti Budapesten" (Denomination, Domestic Servants and Sexual Deviancy in Budapest before 1945) in Karády Viktor, *Zsidóság és társadalmi egyenlőtlenségek, 1867-1945*. Történeti-szociológiai tanulmányok. (Jewry and Social Inequalities, 1867-1945. Historical-Sociological Studies), (Budapest: Replika Kör, 2000), 141-166.

1. TERMINOLOGY AND METHODOLOGY IN DEMOGRAPHY

1.1 Terminology

Demography deals with several aspects of population changes but the most fundamental ones are deaths, births, marriages and divorces.[18] Demography has developed as a science in the last two hundred years when the conditions of scientific investigation emerged in the 19th century. Only by the 19th century were the scholars provided with the data of vital events and with the mathematical-statistical methods. Firstly, the definition of infant death and infant mortality should be determined. Until the 1960s, discrepancies existed in definitions among the countries which caused distortions in international comparisons. In order to eliminate deceitful differences among countries, local demographic traditions of infant death registration should be taken into consideration.

Infant death is defined usually as death after live birth before reaching the age of one year. Those children who were still-born and those who died on the first anniversary of their birth are not counted formally as infant death.[19] Infant mortality is a ratio, a relative frequency of death.[20] Infant mortality is the correlation of live-born infants and deceased infants in a given period, the number of deceased infants compared to live born infants.[21] Today, infant mortality rate is calculated in a number compared to one thousand live-born, while at the

[18] Kenneth W. Kammeyer and Helen L. Grimm, *An Introduction to Population* (Chicago: The Dorsey Press, 1986.), 1.
[19] András Klinger (ed.), *Csecsemőhalálozás* (Infant Death), (Központi Statisztikai Hivatal, 1971.), 9. András Klinger (ed.), *Demográfia* (Demography), (Budapest: ELTE, Állam-és Jogtudományi Kar, Statisztikai és Jogi Informatikai Tanszék, 1996.), 241.
[20] Egon Szabady, *Bevezetés a demográfiába* (Introduction into the Science of Demography), (Budapest: Közgazdasági és Jogi Könyvkiadó, 1963.), 322.
[21] András Klinger (ed.), *Csecsemőhalálozás*. 9

beginning of the 20th century, due to the high number of infant deaths, the ratio was given in percentage.[22]

Interwar statistics used an even more sophisticated division of infant death registration. Jenő Sárkány differentiated two main phases in infant deaths, neonatal and post-neonatal mortality. Death at the age of 7-30 days is called neonatal death, while those in the next 11 months belong to the category of post-neonatal death.[23] Based on recent literature, it is evident that even further divisions existed, although the explanations of the authors are not consistent. A book titled *Demográfia*, published in 1996, claims that infants died within 6 days are to be counted among perinatal deaths, while another work, titled *Népegészségtan*, used a narrower understanding of the same concept, and considered only deaths in the first 24 hours of life to be perinatal.[24] Respectively, infants deceased on the first day of their life were registered separately, while those who died from the 2nd to 6th day belonged to the next category. The third group consisted of infants who died from their 6th to their 30th day, followed by the other infants according to months.[25] The significance of this differentiation is that infant death depends on different circumstances in different stages of that year of life.

The loss of birth is either infant death or still-birth. Still-births should be excluded from infant mortality. The definition of still-birth is not standardized, even in Western European countries. It is a flexible category that gives opportunity for statistic manipulation by narrowing or widening the meaning of the word. As a consequence, the category of still-

[22] Dezső Dányi, "Magyarország népessége a 18. század harmadik harmadában" (The Population of Hungary in the Third Part of the 18th century) in Kovacsics József (ed.), *Magyarország történeti demográfiája (896-1995). Millecentenáriumi előadások* (Budapest, KSH, 1997), 204.
[23] Jenő Sárkány, "A perinatális halálozásról", in *Demográfia* 3, no.3-4 (1960): 460. Kenneth W. Kammeyer, Helen L. Grimm, *An Introduction to Population* (Chicago: The Dorsey Press, 1986.), 185.
[24] András Klinger (ed.), *Demográfia*, ELTE, 245. Balázs Péter (ed.), *Népegészségtan* (Public Health), (Budapest: Semmelweis Egyetem, Egészségügyi Főiskolai Kar, 2001), 55.
[25] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XIII-XXX. (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1925-1942.), passim.

birth was abused by extending the definition of abortion,[26] and modifying the definition of foetal death.[27] In Hungary, infants born dead after the 7th month of pregnancy is considered to be still-birth, even if the infant is died during giving birth, while Lajos Salamon claims that in other countries this period is shorter than seven month, so more still-births were calculated than infant deaths.[28] Another type of manipulation was resulted from different deadlines of infant birth declarations. In countries, where infants were registered later, died infants could be entered as still-born and consequently these countries could reach a better infant death statistics as even infant deaths were declared as still-births.[29] One of the most famous Hungarian interwar demographers, Tivadar Szél, argued that Hungary's backwardness in the field of infant mortality was due only to discrepancies in death definitions.[30] Calculations in the next chapters will prove that his theory is an exaggeration, as infant mortality rate of Hungary was far worse compared to Western Europe.

Registration deadlines were diverse in Europe. In the case of France, Belgium, Switzerland and Luxemburg it was 3 days, while in Spain, only 24 hours. Great-Britain had the most permissive deadline with 42 days, which gave opportunity to register an infant died until the 6th week, as still-born. This is considered to be a great advantage to improve infant death statistics.[31] The extended deadline of registration in Great-Britain and countries under the authority of the Code Napoleon provided the chance to account more still-birth and therefore make a better infant mortality statistics,[32] while in Hungary every infant who gave a

[26] Béla Pápai, "Az újszülöttkori halálozás egyes kérdései Budapesten és néhány Európai nagyvárosban", (The Question of Infant Death in Budapest and in Other European Cities) *Demográfia* 3, no.3-4 (1960): 448.
[27] András Klinger (ed.), *Csecsemőhalálozás*. 9
[28] Lajos Salamon, "A halvaszületéskről", (About Still-birth) *Demográfia* 3, no.1 (1960): 107.
[29] Alajos Kovács, "A halvaszületések, koraszületések és csecsemőhalandóság statisztikájának egységesítése", (Standardization of the Statistics of Still-birth, Premature Birth and Infant Death) *Magyar Statisztikai Szemle* 3, no.7 (1925): 283-285.
[30] Tivadar Szél, "Csecsemőhalandóságunk nemzetközi viszonyítása", (Infant Mortality of Hungary in International Comparison) *Magyar Statisztikai Szemle* 7, no.10 (1929): 1050.
[31] Zoltán Bókay, "A csecsemőhalandóság elleni küzdelem Magyarországon", (Fight against Infant Mortality in Hungary) in Gunst Péter, Angi János et al (eds.), *Debreceni szemle – Válogatás az 1927-44. évfolyamok anyagából* (Debrecen megyei jogú városi önkormányzat kiadása, 1993.), 410.
[32] Károly Schneller, "Halandóságunk nemzetközi viszonylatban", (Hungarian Mortality in International Comparison) *Magyar Statisztikai Szemle* 7, no.8 (1929): 865.

sign of life and lived for at least one minute was considered to be live-born and its death were involved in the infant mortality statistics.[33] Cheating with registration had ambiguous aspects also. In a society not fully secularized and modernized, those infants who seemed weaker or ill, were christened earlier, which had a result of being registered.[34] Furthermore, especially in the 19th and early 20th century, still-birth was considered to be a shame in villages, so these cases were tried to be kept secret.[35] In addition, the village community accepted the demographic behavior of killing unviable infants.[36]

The definition of death according to the UNO is: "The final passing away of all signs of life after live birth at any time, i.e. the cessation of all life functions, without the capability of revival."[37] Today in Hungary, every infant is considered to be live-born who give any sign of life, such as breath, crying, heart activity, navel-cord pulsing.[38] This definition is complemented by the Central Statistics Office in 1971, by claiming that the activity of the vegetative muscles is also the sign of life.[39] These definitions were in force already in the beginning of the 20th century but it took long time until these policies became part of everyday practice. The importance of a unified system was discerned and attempts were made on the level of CMEA and UNO to standardize basic demographic notions.[40]

Besides distinctive terminology, statistics applies mathematical methods to analyze population trends. Computing deaths, especially infant deaths, has not got old traditions as statistical data before the end of the 18th century were not available. For previous centuries, scholars are provided only with assumptions about the life-expectancy at birth.

[33] Lajos Salamon, "A halvaszületésekről", 107.
[34] Tivadar Szél, "Csecsemőhalandóságunk nemzetközi viszonyítása", 1051.
[35] Lajos Salamon, "A halvaszületésekről", 107.
[36] Márta Mohos, "A demográfiai magatartás alakulása a 19-20. század fordulóján. Anya-, csecsemő-, gyermekvédelem" (Demographic Behavior at the Turn of the 19th and 20th Century. Mother, Infant and Child Care) in Faragó Tamás, Óri Péter (eds.), *A Központi Statisztikai Hivatal Népességtudományi Kutatóintézetének 2001.évi Történeti Demográfiai Évkönyve* (Budapest: KSH, 2001.), 435.
[37] *Statistical Yearbook of Hungary* (Budapest, Hungarian Central Statistical Office, 1998.), 613.
[38] Péter Balázs (ed.), *Népegészségtan*, 50.
[39] András Klinger (ed.), *Csecsemőhalálozás*, 9

Judah Matras claimed that the scientific study of the population could not begin until the vital events were not sophisticatedly recorded. By vital events he meant births, deaths, marriages and divorces. These data were gathered for purposes of taxation and governmental administration. In previous centuries data were collected in some cases but these were not regular, systematic compilation. In the Ancient Ages data were used to determine the number of people who would be available for taxation and military services.[41] Data were systematically and in large scale compiled from the 19th century.[42] First it was the function of the church to record the weddings, christenings and burials, but later civic registration emerged, with the rise of the nation-states and individual administration.[43] Civic registration had started already after the French revolution, in the early 19th century in Western Europe and it became regular in Hungary from the Wekerle government in 1895.[44] The significance of civic registration is that previously the registered births and deaths were not complete as churches inscribed the dates of christenings and burials, and not the dates of births and deaths.[45] Counting the population and then recording the information is done by censuses.[46] From the 19th century onwards most constitutions of European societies requires a census to be held in every tenth year. In Hungary censuses were made compulsory by Joseph II., thus additional data about the population have been at the scholars' disposal since then. Since 1869, data have been gathered by the Central Statistics Office in every tenth year. Between

[40] György Acsádi, "A népmozgalmi statisztikák nemzetközi egységesítésének kérdése a KGST országok szakértői munkacsoportjának budapesti ülésén", (The Question of the Standardization of Population Movement Statistics at the CMEA Congress) *Demográfia* 7, no.2 (1964): 266.
[41] Péter Józan, "A halandóság alakulása Magyarországon", (Mortality in Hungary) in Kovacsics József (ed.), *Magyarország történeti demográfiája (896-1995). Millecentenáriumi előadások* (Budapest: KSH, 1997), 363.
[42] Richard T. Schaefer and Robert P. Lamm et al. (eds.), *Sociology* (McGrave-Hill, 1995.), 541.
[43] Kammeyer, *An Introduction to Population*, 59.
[44] Tamás Faragó, "A történeti demográfia", (Historical Demography) in Bódy Zsombor, Ö. Kovács József (eds.), *Bevezetés a társadalomtörténetbe* (Budapest: Osiris, 2003.), 305.
[45] József Kovacsics, "Magyarország népessége 1787-1870", (The Population of Hungary 1787-1870) in Kovacsics József (ed.), *Magyarország történeti demográfiája (896-1995). Millecentenáriumi előadások* (Budapest: KSH, 1997), 263.
[46] According to the United Nations: „A census of population is the total process of collecting, compiling and publishing demographic, economic and social data pertaining at a specified time or times to all persons in a country or delineated territory." (Kammeyer, *An Introduction to Population*, 61.)

two censuses, micro-censuses can be held or scholars had the opportunity to make predictions.[47]

Scientific theories of mortality and infant mortality rates were proposed in the 19th century by excellent scholars such as Fourier, Becker, Knapp, Zeuner, Lexis, Böckh, Gompertz, Makeham. They introduced the notion of death likelihood, which became the central point of calculations even in the 20th century. When applying this method, scholars group deaths on the basis of the date of birth and death.[48] This method is the theoretical basis of the Becker-Zeuner indicator also that was in use in Hungary until the 1960s. The essence of this method is that it takes into consideration the infant deaths of one age-group during two calendar years.[49]

Demographers use mortality tables counting on death likelihood when analyzing mortality and infant mortality rates. The first nationwide mortality table in Hungary was compiled by Jákó Raffmann[50] in 1900/1901. Its significance is proved by the fact that it served as a model until the 1960s.[51] The main innovation of his internationally accepted calculation method is that he analytically balanced the age-group data of censuses in order to exclude the distortional effect of age-accumulation. He determined death likelihood with the mathematical correlation between death frequency and death likelihood.[52]

According to Gyula Barsy, historical demographer, the least reliable method is the one calculating with crude infant death rate. Its main disadvantage is that it does not take into account, that part of the dead infants in a given year, was born in the previous calendar year. In years with equal distribution of deaths and births, this would not cause considerable

[47] Péter Balázs (ed.), *Népegészségtan*, 45.
[48] Etelka Daróczi, "A halandóság alakulása Trianontól napjainkig", (Mortality from Trianon to the Present Day) in Faragó Tamás, Őri Péter (eds.), *A Központi Statisztikai Hivatal Népességtudományi Kutatóintézetének 2001.évi Történeti Demográfiai Évkönyve* (Budapest: KSH, 2001.), 305.
[49] Gyula Barsy, "A csecsemőhalandóság mérése", *Demográfia* 1, no.1 (1958): 53.
[50] Raffmann Jákó was the mathematician of the First Hungarian Insurance Company. (Etelka Daróczi, "A halandóság alakulása Trianontól napjainkig", 306).
[51] Gyula Barsy, "A csecsemőhalandóság mérése", 53.
[52] Etelka Daróczi, "A halandóság alakulása Trianontól napjainkig", 306.

distortion, in the first half of the 20th century, however, due to wars, epidemics and famines this was not the case. Nevertheless, the crude rate indicator was used also in the 1960s. Gyula Barsy assigned greater significance to the Rahts indicator, which is a weighted indicator that determined infant mortality rate from the sum of two fractions. One of the fractions compares the number of death in a given year to the number of live-born of the same year, while the other one compares the same amount of infant deaths to the number of live-born of the previous year.[53]

In the 1960s, demographers started o use a new method, called Böckh-indicator. While Gyula Barsy considers the Böckh-indicator the best one, Etelka Daróczi evaluates it as a sign of a step backward as in her understanding it is least founded theoretically. The chief merit of this method is that it eliminates the mistake of not taking into consideration infant deaths happening before the calendar year under investigation. When applying this indicator, demographers calculate infant mortality rate from infant death in a given year and the life-expectancy of the two birth age-groups.[54]

1.2 Demographic transitions and convergence models

Demographic events happened in the framework of demographic transitions and convergence models. Demographic development between 1870 and 1960 were named as the first and second demographic transitions. In these one hundred years crucial processes and transformation took place in European population development, especially concerning the size of a country's population. Parallel to these events, demographic behavior of European countries started to converge, creating a unified European society.

[53] Gyula Barsy, "A csecsemőhalandóság mérése", 37.
[54] Ibid, 53.

The most significant characteristic of the first demographic transition is the changing patterns of the number of deaths and births, which made population growth possible.[55] Starting from the late 1700s, continuing until the middle of the 1900s, a steady reduction took place in death rate in North-Western and Western Europe.[56] The decline in death rate is crucial because high death rate was the major reason behind modest population growth until the 18th century. The population growth, usually referred to as "population explosion" began in the 18th century and continued until the 20th century. Until the 18th century the population grew slowly, sometimes even more people died annually than were born, due to the famines, epidemic diseases and wars.

John McKay claims that population growth affected all European countries equally. General decrease in mortality in Europe cannot be observed until the end of the 19th century.[57] It was possible because of the advances in food-production, sanitation, nutrition and public health care.[58] While death rates fell, birth rates remained high, and as a consequence, societies experienced rapid population growth in this period of European history. At the end of the 19th century, however, in many European countries the birth rates began to decrease as well. These changes from high birth rates and high death rates to relatively low birth and death rates in 20th century Europe are called demographic transition, or demographic revolution by Daniel Noin.[59]

[55] Francois Höpflinger, *Bevölkerungssoziologie. Eine Einführung in bevölkerungssoziologische Ansätze und demographische Prozesse* (Weinheim und München: Juventa Verlag, 1997.), 32. László Hablicsek, Az első és második demogárfiai átmenet Magyarországon és Közép-Kelet-Európában (The First and Second Demographic Transitions in Hungary and in Central-East Europe), (Budapest: KSH, 1995.), 11.
[56] Schaefer and Lamm, *Sociology*, 545.
[57] Dirk van de Kaa, "Europe and its population. The long view" in. Dirk van de Kaa et. al. (eds.), *European Populations: Unity and Diversity* (Boston: Kluwer Academic Publishes, 1999), 17.
[58] Schaefer and Lamm, *Sociology*, 545.
[59] Daniel Noin, Robert Woods (eds.), *The Changing Population of Europe* (Cambridge: Blackwell Publishers, 1993), 21.

A. J. Coale argues that in the period of the demographic transition, a society is transformed from a traditional, pre-industrial stage to a developed, modernized structure.[60] Demographic transitions can be illustrated as a three-stage process. The first phase is characterized by high death rates and high birth rates and because of their equal ratio population grew only slowly.[61] In the second phase, death rates began to decline and life-expectancy grew. It is the result of the reduction in infant death. According to Höpflinger, parents either do not realize that more children live longer or they had no chance to reduce their birth number, for example because of cultural or religious reasons. Consequently, in this phase population grew fast. In the third stage, death rates began to be stabilized in a low level and also the birth rates fell due to more efficient family planning. Because of this phenomenon, in this stage there was only small population growth. As Höpflinger himself admits, this three-stage process is a generalization, a schematic model, as the pattern of the transition varies from state to state.[62] By today, about two-thirds of the world's countries have passed through the second phase.[63]

In the 1960s, another process of radical changes began in Western Europe. The reasons behind it are the end of the baby-boom,[64] higher age at marriage, new family formations and new attitudes.[65] The name second demographic transition was given to these changes. The second transition brought changes in the area of fertility and nuptiality because of the spread of effective contraception and increased access to abortion.[66] Fertility fell below the replacement level in whole Western Europe, except in Ireland, although later, the two-

[60] A. J. Coale, The importance of common language and the strength of religious values, available: www.ncbi.ulm.nih.gov/entrez/query.fcgi.cmd=retrieve&db=PubMed&list-nids=12235002&dopt=abstract, (Access: 21 January 2005.)
[61] Höpflinger, *Bevölkerungssoziologie*, 33.
[62] Ibid, 34.
[63] Schaefer and Lamm, *Sociology*, 546.
[64] The name baby boom was given to a phenomenon occurring in Western European societies after the Second World War. Durin a period of 15 years, these societies experienced exceptionally high fertility rate. David Coleman, "New Patterns and Trends in European Fertility: International and Sub-national Comparisons" in David Coleman (ed.), *Europe's Population in the 1990s* (Oxford: Oxford University Press, 1996.), 11.
[65] Van de Kaa, "Europe and its population. The long view", 28.

child family model became more widespread in Ireland as well.[67] The degree of cohabitation and voluntarily childlessness increased too.[68] These changes in demography can be attributed to a value change and to the effects of individualization that stresses the person's free choices about marriage, cohabitation and childbearing.[69]

In relation to 20th century European demography the crucial problem is the question of integration, the dynamics of unity and diversity. The theories of Peter Flora and Franz Rothenbacker, Hartmut Kaelble and Susan Cotts Watkins represent three stages of integration. Flora and Rothenbacker deal with the unification of the whole of Europe, Kaelble investigated the degree of convergence in Western Europe, while Watkins was concerned with regional integration of European countries.

In his work, *The European Population 1850-1945*, Flora and Rothenbacker emphasize that unity and diversity are fundamental issues in relation to European societies. Europe is very colorful ethnically and demographically, compared to other parts of the world; that is why it is justified to examine the differences between and within the countries. They claim that there has always been a tension between unity and diversity, which provided the unique dynamism of European society.[70]

Politically, culturally and economically Europe was divided between its Western and Eastern part. This division appeared in demography as well and it also resulted in a discrepancy in family development. The difference is rooted in the past and became stronger during the 19th century with the rise of industrialization, urbanization, nation-state formation, mass education and the democratization of the political systems. Europe reached its "highest degree of fragmentation" in its history with the formation of nation-states, which meant new

[66] Ibid, 28.
[67] John R.Gillis et al., *The European Experience of Declining Fertility, 1850-1970. The Quiet Revolution.* (Cambridge: Blackwell Publishers, 1992), 2.
[68] Van de kaa, "Europe and its population. The long view", 28.
[69] Ibid, 31.
[70] Rothenbacker, "The European Population 1850-1945", 5.

dimensions in diversity.[71] According to Flora and Rothenbacker, the reason behind economic diversity is the different timing and character of the process of industrialization.[72] This coincides with what David Coleman claims, that European states are economically different because they are in the different stages of the same development.[73] Flora and Rothenbacker claim that demographic differences existed not only between the Western and Eastern part of Europe, but a Northern-Southern line can be drawn also in terms of socio-economic development, religion, social structure and culture.[74]

This period in the first half of the 20th century and the late 19th century was exceptional in European demographic history because with some exceptions, like France, the population grew fast, faster than in the previous centuries. In the continent the population growth rates were very high until 1914. This process is linked to the development of the first demographic transitions. Due to the decrease in the number of deaths and also the decrease in the number of births, the pace of population growth slowed down. In the transition the first sign of development was the decline of mortality due to the medical and sanitation improvements, followed by the decline in fertility.[75]

According to Flora and Rothenbacker, the changes occurred systematically and they were spread to different directions according to the stages of modernization. Their opinion is that the demographic differences depended on the development in industrialization. On the basis of this, the patterns of mortality and fertility declines spread from the North to the South and from the West to the East. The only difference is that the pattern of decline of fertility arrived later in the Southern and Eastern part of Europe only around the 1920s.[76]

[71] Ibid, 6.
[72] Ibid, 7.
[73] Coleman, "New Patterns and Trends in European Fertility", 11.
[74] Rothenbacker, "The European Population 1850-1945", 12.
[75] Ibid, 14.
[76] Ibid, 15.

The First World War was a milestone in terms of mortality and fertility. Mortality rates declined further but at a slower pace, while fertility declined further at a faster pace. It was due to the military losses and civilian deaths and also to the fewer births as a consequence of male participation in the war.[77] So, in the understanding of Flora and Rothenbacker, Europe is one of the most demographically colorful parts of the world, however unity is a relevant issue; changes have occurred and spread to different directions in Europe, while finally every country would reach the same demographic pattern.

Hartmut Kaelble, German social historian, carried out the most systematic research about the theory of convergence. The starting point of Kaelble's thesis was that by the 1990s Western Europe is not only a political community, but the countries of Western Europe form a real, unified "European society". He based his statement on the assumption that European societies saw a special course of development that was different from the modernization model of the United States and Japan. In the 19th and 20th centuries a number of similar population patterns emerged in the European countries.[78]

Kaelble identifies six similar characteristics shared by Western European countries. The first one is the European family, which is characterized by a nuclear structure, relatively late marriage and stronger intimacy within a family. Secondly, he mentions the industrial society, which was formed only in Europe. The third aspect is that in Europe existed a "civilian social milieu", which was missing from other parts of the world, such as the bourgeois, proletarian and the peasant milieus. Another characteristic of Europe is that urbanization was slower and smaller in scale than in the United States. He claims that today Europe is one of the least urbanized regions in the world.[79] Closely connected to it, Europe has a typically dense network of middle-sized towns. As the next factor, he mentions the

[77] Ibid, 15.
[78] Hartmut Kaelble, Jürgen Schriewer (eds.), *Gesellschaften im Vergleich. Forschungen aus Sozial- und Geschichtswissenschaften*, 343.
[79] Ibid, 343.

special type of mass consumption in Europe that characterized Europe only after the Second World War, but unlike the American model it has roots in the past of Western European society and it was not a mere application of the American consumption model.[80]

Kaelble created a complex macro-model of a special, unified Western European society, which came into existence due to the effects of industrialization, more precisely, the establishment of a special industrial society. According to him, Western European countries not only shared a similar way of development but since the end of Second World War, the differences among the states became so insignificant that by today a unified Western European society has been formed. The explanation of this development is twofold. Firstly, due to the economic development, standards of living rose in whole Western Europe between the 1950s and 1970s. Secondly, a cultural and political process took place, which he calls the "democratization of Europe." By this he means the exchange of social values and models that led to integration.[81]

Susan Cotts Watkins claims that in the late 19th century and perhaps earlier, the levels of marital fertility, illegitimacy and marriage differed greatly from one part of the country to another. These differences decreased by 1960. She claims that it was the result of the processes of state formation, nation building and market integration. She calls this hardening of national boundaries in demography, "demographic nationalism."[82] In her understanding it does not mean organized social movements or attempts led by the state in order to influence marriages or births. It is rather an evidence of the creation of a national community which was happening in the framework of the integration of national markets, state expansion and nation building.[83]

[80] Ibid, 345.
[81] Ibid, 345.
[82] Susan Cotts Watkins, *From Provinces into Nations: The Demographic Integration of Western-Europe 1870-1960*), XIII.
[83] Ibid, XIII.

Watkins's aim was to describe the fertility decline in Western Europe. She questioned the thesis that demographic decisions are private and personal choices that depend on solely the individuals. She argued that the group to which individuals belong determines their demographic behavior.[84] Her definition of a group has two stages. Firstly, she chooses spatially defined groups such as counties in England or departments in France. These are generally called provinces. Provinces are units smaller than countries but larger than villages or towns.[85] Besides, she defines groups by occupation and religion.

On the basis of her calculations, she claims that both the diversity among countries and the diversity within countries decreased between 1870 and 1960. The first statement means that the countries in Western Europe differed from each other less in 1960 than in 1870. The second statement refers to the process by which the differences between provinces in one country decreased. From that statement she draws the conclusion that demographic similarity is a sign of social integration. She argues that if a group changes from one demographic pattern to another, then other differences between groups will diminish too.[86] Since the European Union was formed, several works has dealt with the political, economic integration of Europe. Besides this, social integration is significant as well and through examining demographic processes, Hungary's position in this model can be defined in terms of social integration into the European community and within the country as well.

In 1870 a big difference existed in childbearing and in marriage within each of the countries in Western Europe. Watkins cites an example from Switzerland, where in one canton half of the women in childbearing age were married, while in another canton only one-third. By 1960 however, these differences diminished and the ratio of married women in childbearing age became more equal among provinces such as in Lucerne and Glarns.[87] She

[84] Ibid, XIII.
[85] Ibid, 11.
[86] Ibid, XIV.
[87] Ibid, 3.

illustrates her theory with a colorful map. She invites the reader to imagine the demographic map of Western Europe. She explains that in 1870 Western Europe would be a color distinct from all other places in the world. The countries would be different shades of this color, while the counties would be different intensity variants.[88] So, in 1871 provincial boundaries were very sharp and vivid, while the national boundaries of the countries were faint. This situation reversed by 1960 and the differences between provinces decreased.

According to Watkins, it also had a result that linguistic differences diminished between the counties. She puts an emphasis on that because in her opinion language was an important factor. It reinforced the view that the people in one country speaking the same language belong to the same national community. It also meant that they could receive the same education, participate in the national economic market and national welfare systems, and that they had equal access to the press that informed them about national issues.[89]

[88] Ibid, 50.
[89] Ibid, 4.

2. RESIDENCE AS A DETERMINING FACTOR IN INFANT MORTALITY RATE

The Hungarian pattern of infant mortality rate and its place in demographic transition will be analyzed on three levels. The first aspect to be covered is the determining effect of residency in the number of deceased infants. First the territorial divergence of the country will be illustrated with data compared for Budapest and for different parts of Hungary. As a second step, urban-rural differences in infant mortality rate will be discussed with respect to divergence among Budapest districts. The number of deceased infants was not the same in different districts and in different social layers. The third subchapter aims at analyzing the different living circumstances in Budapest working class and middle class families and its effect on infant mortality rate.

Residence influences greatly the survival chances of infants with families in urban and rural areas having unequal chances. In this chapter, the city is approached as a place to live in, in terms of health conditions and its effects on infant mortality rate. The Budapest experience of infant death was different from rural settings but was also diverse in Budapest itself, according to social groups, districts and flat size. The flat conditions of workers and the middle class can be examined based on statistical data gathered by Lajos Illyefalvi and literary works written in interwar Hungary, for example by Sándor Márai or Tibor Barabás.

2.1 Territorial divergence – statistic analysis

Susan Cotts Watkins claimed that during the demographic transition diversity decreased in terms of fertility and marriage patterns.[90] In this chapter this assumption will be examined in the case of infant mortality. My main argument is that in the interwar years the better living conditions resulted in a substantial improvement in reducing infant mortality in Budapest compared to the countryside, and in better infant mortality rates in middle class

homes than in workers' flats. The main parameters of flats, available services and living conditions will be considered and compared, as well as some important theories concerning urban development by Andrew Lees, Henri Lefebvre, the German School of urban studies, the Chicago School of urban studies, Lewis Mumford and Louis Wirth.

In the interwar period, significant territorial divergence existed in infant mortality in Hungary, due to the different age-distribution in separate parts of the country.[91] In addition, Tivadar Szél claims that the higher fertility rate in some counties resulted in higher infant mortality rate.[92] Based on statistical data, collected in the *Magyar Statisztikai Évkönyv* [93] (Hungarian Statistical Yearbook) for every year between 1920 and 1941, these territorial discrepancies can be traced. Firstly, the better infant mortality of Budapest should be mentioned, compared to the countryside. Before the First World War, infant mortality rate in Budapest was 190‰, while in the counties, an average of 237 infants died out of a thousand live-born.[94] Budapest kept its better position throughout the interwar period, which, however, was not only the direct consequence of the better living conditions and health care services in the capital. The role of manipulation with the registration deadline was mentioned before in the previous chapter, while this practice manifested itself in a way that many illegitimate infants born in Budapest were given to wet-nurse in the countryside, thus the infants who died were counted in the statistics of the countryside.[95]

Besides the data from the *Magyar Statisztikai Évkönyv*, supplementary information can be found in the appendix of a book written by György Acsádi and András Klinger.[96] Data

[90] Susan Cotts Watkins, *From Provinces into Nations: The Demographic Integration of Europe 1870-1960*, 84.
[91] György Acsádi, Klinger András, *Magyarország népesedése a két világháború között* (The Population of Hungary between the Two World Wars), (Budapest: Közgazdasági és Jogi Könyvkiadó, 1965), 51.
[92] Tivadar Szél, 'A csecsemőhalandóság újabb alakulása' (New Results in Infant Mortality Rate), *Magyar Statisztikai Szemle* 15, no.10 (1937): 871.
[93] *Magyar Statisztikai Évkönyv*, Új Folyam, volumes XXVII-XLIX (Budapest, Az Atheneum Irodalmi és Nyomdai Részvénytársulat könyvnyomdája, 1925-1943.), passim.
[94] György Acsádi, Klinger András, *Magyarország népesedése a két világháború között*, 51.
[95] Ibid, 51.
[96] György Acsádi, Klinger András, *Magyarország népesedése a két világháború között* (The Population of Hungary between the Two World Wars), (Budapest: Közgazdasági és Jogi Könyvkiadó, 1965.)

show that in 1921 the counties with the highest infant mortality rate were Baranya, Bács-Bodrog, Békés, Heves, Szabolcs-Ung, Szatmár-Ugocsa-Bereg and Somogy (Appendix Table 1). In all cases more than 200 infants died out of a thousand live-born.[97] The territorial distribution of these counties was not systematic, so they could not be found in one part of the country only (Appendix Map 1). This phenomenon is also true for the counties with the best results, around 170-180‰. Abaúj-Torna, Fejér, Komárom-Esztergom, Győr-Moson-Pozsony, Zala and Sopron counties are found both in North-Hungary and in different parts of Transdanubia. Between the best and worst infant mortality rate – Sopron: 158‰, Bács-Bodrog: 229‰ – there was a huge difference.[98] In the 1920s, the infant mortality rate of Budapest was around 120‰, which is better than those of the counties with the best results.

In the 1930s, contrary to the previous decade, a marked pattern can be observed in territorial distribution. Counties in Transdanubia, like Baranya, Fejér, Vas, Komárom-Esztergom, Győr-Moson-Pozsony, Tolna and Sopron had better results than other parts of the country. Another feature of infant mortality rate in the 1930s is that in North-Hungary, in the counties of Abaúj-Torna, Bács-Bodrog, Nógrád, Szabolcs-Ung, Szatmár-Ugocsa-Bereg and Heves infant mortality rates were the worst in Hungary. While Transdanubia had an infant mortality rate around 115‰, in North-Hungary, on average 147 infants died out of a thousand live-born in 1938.[99] This is still a great difference between two parts of the country, however a general decrease can be seen compared to the data in 1921. The third territorial unit distinguished in the statistics from the 1930s is the Great-Plain. Counties like Békés, Bihar, Hajdu and Csongrád had a relatively high infant mortality rate comparing to other parts of the

[97] György Acsádi, Klinger András, *Magyarország népesedése a két világháború között*, 308-309. The name of the counties are given according to the contemporary administration.
[98] György Acsádi, Klinger András, *Magyarország népesedése a két világháború között*, 308-309. *Magyar Statisztikai Évkönyv*, 1928, 19.
[99] György Acsádi, Klinger András, *Magyarország népesedése a két világháború között*, 308-309. *Magyar Statisztikai Évkönyv*, 1938, 22.

country with on average 185 infants dying out of thousand live-born in 1920 and 121 in 1941.[100]

One of the success-stories is Baranya county, where the infant mortality rate fell from 223‰ to 100‰ in 17 years. Besides Baranya, in Békés, Bács-Bodrog and Bihar also a remarkable decline can be observed, while Heves county had the worst infant mortality rate in 1938 with 160‰, which was worse than that of Sopron county in 1921.[101] By 1941, the average infant mortality rate among the counties was 128‰, which is almost the half of that of 20 years before. Nevertheless, the effects of the territorial changes with the reattachment of territories back to Hungary in 1938 and 1939 can be seen, as well as the first years of the Second World War, when the continuous decrease of infant mortality rate stopped and a slight increase can be observed.[102] Compared to Budapest, these data are higher than in the capital, where since 1930, only around 110 infants died per thousand live-born.[103]

Besides counties, statistic yearbooks contain data of the infant mortality rate for the biggest towns in Hungary. These data prove that towns had better infant mortality rates than counties even in 1920. When counties had an infant mortality rate of 195‰, towns had only 180‰.[104] Table 1 shows the continuous better result of the towns which by the end of the examined period was 136‰ for counties and 106‰ for towns. It follows from the table that as well as in the case of counties, a huge decline took place in towns also in 20 years.

[100] *Magyar Statisztikai Évkönyv*, 1919-21, 21. *Magyar Statisztikai Évkönyv*, 1941, 17.
[101] György Acsádi, Klinger András, *Magyarország népesedése a két világháború között*, 308-309. *Magyar Statisztikai Evkonyv*, 1938, 22.
[102] Based on data from the *Magyar Statisztikai Évkönyv*, 1938-42, passim.
[103] Based on data from the *Magyar Statisztikai Évkönyv*, 1938-42, passim.
[104] *Magyar Statisztikai Évkönyv*, 1919-21, 21.

Table 1 – Infant mortality rates in towns and counties (given per one thousand live-born)

	1920	1925	1928	1930	1935	1938
Counties	195	173	183	157	154	136
Towns	180	138	143	128	140	106

Source: *Magyar Statisztikai Évkönyv*, Új Folyam, volumes, XXI, XXVII, XXX, XXXII, XXXVII, XL (Budapest, Az Atheneum Irodalmi és Nyomdai Részvénytársulat könyvnyomdája, 1919-21, 1925, 1928, 1930, 1935, 1938.), pp. 21, 19, 11, 22, 24.

Further concrete examples confirm this phenomenon although in 1921, in a few cases like in the town of Komárom or Győr, infant mortality rate was the same in counties and towns but in the majority of the cases throughout the interwar period fewer infants died in towns. In the town of Sopron infant mortality rate was 148‰, while in Sopron county 191‰, or 165‰ in Szeged while 194‰ in Csongrád county.[105] By 1938, however, the town of Győr had an infant mortality rate of 87‰, while Győr county had 121‰. Similarly, in Székesfehérvár 102 infants died out of a thousand live-born, while in Fejér county 122.[106] (See Appendix Table 2 for further examples)

In the interwar period, the process of territorial integration can be observed in Hungary as differences among the countries decreased. Development pointing towards the same direction is a novelty compared to the pre-transition period when hectic mortality patterns were characteristic of the counties. Dezső Dányi claimed that infant mortality rates in counties before the first demographic transition oscillated between the extremes.[107] Rudolf Andorka confirmed this view when stating that until the second half of the 19th century the infant mortality rate in Hungary was unequal, as in certain parts of the country an early decline can

[105] *Magyar Statisztikai Évkönyv*, 1925, 21.
[106] *Magyar Statisztikai Évkönyv*, 1939, 22.
[107] Dezső Dányi, "Magyarország népesedése a 18. század harmadik harmadában, 204.

be observed, while in other parts considerable improvements were not reached until the 20th century.[108]

It can be concluded on the basis of these results that territorial differences existed in Hungary during the interwar period. While in the 1920s a clear pattern did not exist, by the end of the 1930s, counties in Transdanubia had the best results, as opposed to the counties in North-Hungary that had the worst infant mortality rate. These data also show that in the interwar period the infant mortality rate decreased significantly. The national average of 196‰ fell to 134 ‰ in 21 years, which is a remarkable decline. In the next ten years, by 1956, the national average halved again to 59‰.[109] In these figures lies the significance of the interwar years in terms of infant mortality rate. This was the period when a great decline can be observed in the number of infants dying. In the next two sections the contribution of living conditions to the decline of infant mortality will be examined in order to explain these changes.

2.2 Urban-rural differences in infant mortality rate

As a response to modernization and industrialization, arguments appeared that reflected the consciousness of urban-rural differences and their demographic consequences. During the 19th century, fears emerged that the psychically and physically degenerated urban population would die out in 2-3 generations if cities could not attract youth from the countryside to fulfill the demographic needs of the cities.[110] Another wave of fears began when the state had to realize that most of the urban dwellers were unable to perform their military duties.[111] Moreover, issues were raised about the dangers of the emptying of the

[108] Rudolf Andorka, *Gyermek, család, történelem.* Történeti demográfiai tanulmányok (Child, Family, History. Studies in Historical Demograpy), (Budapest: Századvég, 2001), 120.
[109] György Acsádi, Klinger András, *Magyarország népesedése a két világháború között*, 308-309
[110] Andrew Lees, *Cities Perceived. Urban Society in European and American Thought 1820-1940* (Manchester: Manchester University Press, 1985.), 138, 147.
[111] Ibid, 139.

countryside, the decline of agriculture and the observable stagnation of urban population as a consequence of geographic redistribution.[112] Urban-rural differences had other demographic manifestation in terms of infant mortality as well.

As early as the 19th century, discourse began about the new urban experiences, their demographic effects and the relationship of the urban and rural settings. Advantages and disadvantages were listed on both sides. In his book entitled *Cities Perceived*,[113] Andrew Lees focuses on mainly one aspect of urbanization, its cultural perception, while placing urban way of life in the framework of social and cultural transformation of the 19th and 20th centuries in general. He investigates the consequences of urban growth and perceives the city as an illustration and vehicle of social and cultural transformation. The city was a place of both quantitative and qualitative change, a place of problematic transition from rural to urban. Lees draws attention to the negative aspects of the early phase of urban growth, such as overcrowding, epidemics, high frequency of illness and mortality.[114] He also emphasizes the widening social differences between people residentially and spatially that later led to urban segregation. Furthermore, he claims that in towns, even in small towns, the presence of a cultural community and social entity can no longer be observed. In addition, traditional bonds loosened as agencies like family and church lost their social control function.[115]

Different phases can be distinguished in the 19th and 20th century literature about the 'city', according to the perception of the urban. In the first decades of the 19th century, British book titles contained words such as 'shadow', 'swamp', 'bitter', 'cry' and 'ragged' in connection with the urban, referring to the bad residential and sanitary conditions of the city that led to numerous social problems like crime, unemployment and poverty.[116] After a period

[112] Ibid, 17.
[113] Andrew Lees, *Cities Perceived. Urban Society in European and American Thought 1820-1940* (Manchester: Manchester University Press, 1985.)
[114] Ibid, 3.
[115] Ibid, 5.
[116] Ibid, 34.

of hostility, a phase characterized by optimism came and belief in urban progress increased. From the 1880s however, the attention of publicists, clergymen and social scientists shifted again to the poverty of the lower classes and overcrowding. Once again, these thoughts emerged first in Britain where the low wages, poor housing conditions and the masses of underfed women and children were criticized.[117] Hostility towards the urban also emerged later. Henri Lefebvre argues that the expanding city attacks the countryside, corrodes it, as urban life penetrates into peasant life and dispossesses it of its traditional features. His theory is based on the concepts of appropriation, exploitation and domination. He also claims that the relationship between town and country changed deeply in different periods due to the mutual economic and cultural responses.[118]

Research was carried out on the urban-rural problem both by the German School of urban studies and the Chicago School. In the case of the German School of urban studies the necessary balance between the town and country was emphasized both by Georg Simmel and Oswald Spengler, as a necessity to keep the health of societies. For Simmel, this health was mainly mental health, while in Spengler's understanding it was connected to culture and civilization, both of which however also have a physical aspect.[119] The other trend of urban studies, the Chicago School, approached the city internally, from the aspect of moral order and ecology but Robert Park argued that mental instability, alienation, psychic and moral conditions of the city are also reflected in physical ways.[120] The Chicago School also researched whether the city can be considered as quite the opposite of the rural, in terms of

[117] Ibid, 106-107.
[118] Henri Lefebvre, *Writings on Cities*. Selected, translated and introduced by Eleonore Kofman and Elizabeth Lebas (Cambridge: Blackwell, 1996.), 119.
[119] Ibid, 10-11.
[120] Richard Sennett (ed.), *Classic Essays on the Culture of Cities* (New York: Appleton-Century-Crofts, 1969.), 14. Paul Hohenberg and Lynn Hollen Lees, *The Making of Urban Europe 1000-1950* (Cambridge: Harvard University Press, 1985.), 263.

participation in society and in the sense of how the transition and transformation of the mind and attitudes are completed when moving from villages to cities.[121]

By the end of the 19th century, a new phenomenon emerged, the image of a sick city. Due to a shift in the curriculum of medical sciences, doctors put greater emphasis on public health conditions. As a consequence, illness was not only conceived as that of sick individuals but also as sick cities. Physicians criticized not only pollution, job-hazards, epidemics, flat conditions among the disadvantages of cities but also anxieties, disappointment of commercial life and concluded that urban lifestyle is harmful for bodily health at all levels.[122] The image of a sick city returned later, in the writings of Chevalier. In his study, published in 1958, he blames the waves of migrants for streaming into the city, since they deformed social life, caused poverty and destroyed working morals, thus making the city sick.[123]

Chadwick and other 19th century authors also admitted that some of the above-mentioned problems were not confined to towns only, as the endemic filth of slums was also present in the countryside.[124] Thomas Macaulay argued that industry contributed to rural development as well, as poverty decreased in some parts of the countryside with industrial factories. Thus he claims that urban-rural development patterns are not so clear-cut.[125] Besides Macaulay, Louis Wirth pointed out some paradoxes in terms of urban-rural differences when emphasizing that they are not two separate entities, since the suburban way of life bears resemblance to rural lifestyle, while a mainly urban characteristic, industry, is also to be found in villages. Development in transportation and communication brought the two types of settlements even closer to each other.[126]

[121] Richard Sennett (ed.), *Classic Essays on the Culture of Cities*, 17.
[122] Andrew Lees, *Cities Perceived*, 18.
[123] Paul Hohenberg, *The Making of Urban Europe 1000-1950*, 263.
[124] Andrew Lees, *Cities Perceived*, 23.
[125] Ibid, 40.
[126] Richard Sennett (ed.), *Classic Essays on the Culture of Cities*, 165.

Some basic requirements for a healthy city were defined as early as the beginning of the 19th century, nevertheless they were absent even in the 20th century. These basic stipulated conditions were the free circulation of fluids and air, acceptable housing conditions, drainage, adequate water supply and the elimination of waste.[127] In interwar Hungary steps were taken in the name of the 1876 law. Soon after the 1867 Compromise, state intervention was urged as it was evident that the living conditions of villages had not improved in the past one hundred years. Wider streets, drive-pipes, and drainage would have been needed but instead dirt, mud, animals, closed windows, unhealthy public and private houses were characteristic of the countryside. The law required that in a 100m3 room a maximum of 5-6 people were permitted to live. In reality, however, an average of 20-30 people occupied a space like that. Lewis Mumford draws attention to the fact that never before had human destitution been accepted as normal and inevitable.[128]

The biggest obstacle according to Bezerédyné and Zalányi was the mentality of the village population, their ignorance and stubborn character. They should be collectively educated, and given time to get use to public health rules.[129] This coincides with the opinion of Susan Cotts Watkins, who claims that the remnants of folk therapies prove that in rural areas individual behavioral patterns ruled supreme, so people did not belong to the large community of the state but to the local communities. The influencing power of local communities is more obvious in the area of fertility but through the problem of breastfeeding, its effect can be traced in infant care as well.[130] She questions the thesis that demographic decisions are private and personal choices that depend solely on the individuals. She argues

[127] Andrew Lees, *Cities Perceived*, 22-23.
[128] Andrew Lees and Lynn Lees (eds.), *The Urbanization of European Society in the Nineteenth Century*, 106.
[129] Magdolna Bezerédyné dr. Hertelendy, dr. Hencz Aurél and dr. Zalányi Sámuel, *Évszázados küzdelem hazánk egészségügyéért* (Centuries of Fights for Hungary's Medical Care), (Budapest: Közgazdasági és Jogi Könyvkiadó, 1967.), 35. Margit Mezey, "Hozzászólás Killer Tiborné Simonits Marcella testvér közleményéhez," (Contribution to the Proceedings of Killer Tiborné Simonits Marcella), *A Zöld Kereszt – Tudósító egészségügyi védőnők részére* 2, no.7 (1931): 23.
[130] Susan Cotts Watkins, *From Provinces into Nations: The Demographic Integration of Europe 1870-1960*, 20.

that the group to which individuals belong determines their demographic behavior.[131] Health visitors in villages, members of the *Zöldkeresztes* movement also had to face serious obstacles in the Hungarian countryside. Among these, the bad quality of well-water, small portions of meat, inadequate education and the lack of hygiene were the most devastating.[132]

Innovation in 19th century medicine and bacteriology helped the advance of public health. The research of József Fodor and József Kőrösi demonstrated the role of water in spreading epidemics like typhus and cholera. Further research carried out by József Fodor proved the bad hygienic condition of air, water and soil due to factories and workshops that infected them. He highlighted the role of famine, overcrowding and basement flats in spreading infectious diseases thus increasing the infant mortality rate.[133] Therefore in Budapest, more attention was paid to establish new drainage, sewage disposal, pump stations and water-works. As a result of the waterworks founded in 1893 in Káposztásmegyer, an undoubted improvement could be traced in infant mortality rates between 1901 and 1905.[134] Furthermore, as part of the innovations, a separate technical department was called into existence in the Ministry of the Interior in order to prevent epidemics by examining hygienic conditions of wells, drainage systems and water-works and thus facilitate domestic cleanliness and personal hygiene.[135]

In addition to this, rules were also enforced in villages regarding the building requirements of private houses. Another decree conducted that agricultural workers should build homes that comfort the norms of having at least 4m2 space and 10m3 air-space for each person.[136] The aim of these declarations was to prevent tuberculosis epidemics in the countryside, however public utilities were not developed and decrees were not kept which

[131] Ibid, XIII.
[132] Magdolna Bezerédyné dr. Hertelendy, *Évszázados küzdelem hazánk egészségügyéért*, 56.
[133] Géza Hahn, *A magyar egészségügy története* (The History of Hungarian Medical Care), (Budapest: Medicina Könyvkiadó, 1960.), 66-67.
[134] Ibid, 60.
[135] Ibid, 61.
[136] Ibid, 61.

resulted in no improvement in living conditions and infant mortality rates in villages.[137] Furthermore, Budapest had other advantages as well, due to the enforced laws at the end of the 19th century. The 1868/38 law required basic hygienic conditions in schools and in food-supply. The 1884 law introduced labor health care, including examination of meat, elimination of lead, and food poisoning.[138] From 1930, the provost of public health regularly conducted examinations in public buildings, like schools, churches, spas, theatres, dental surgeries and asylums. They controlled food transportation, water-hygiene and paid attention to handling dead corpses.[139] Villages usually lacked these services.

Nevertheless, smaller towns and the outskirts of Budapest had similar conditions as villages which prove the aforementioned thesis of Louis Wirth. Between 1890 and 1910 the number of workers employed in industry and mining increased by 0.5 million, so by 1910 it reached 844 thousand.[140] Between 1880 and 1910, the number of female domestic servants also doubled, reaching 58,853 persons. Gyáni argues that domestic service was almost the only occupation available for women, migrating to the capital from rural areas, especially for unmarried women in their 20s and 30s.[141] Due to population growth, the population density was 4,500 inhabitants per km2 in Budapest, as opposed to the national average of 64 inhabitants per km2.[142] The disadvantages of suburbs can be traced in some other fields as well. By 1941, a full conduit was completed in the capital, while Kőbánya was supplied only with 66% of drive-pipes. Similarly, the degree of overcrowding decreased by 1930, except for the outskirts, where density became even higher.[143] Adolf Weber claims that due to the waves of newcomers it became impossible to provide acceptable accommodation for everyone. He

[137] Magdolna Bezerédyné dr. Hertelendy, *Évszázados küzdelem hazánk egészségügyéért*, 46. Géza Hahn, *A magyar egészségügy története*, 60.
[138] Géza Hahn, *A magyar egészségügy története*, 62.
[139] *Magyar Statisztikai Evkonyv*, 1930, 27. *Magyar Statisztikai Evkonyv*, 1940, 368.
[140] Károly Kapronczay, *Fejezetek 125 év Magyar közegészségügyének történetéből*, 36.
[141] Gábor Gyáni, *Women as Domestic Servants: The Case of Budapest, 1890-1940* (Institute on East-Central Europe, Columbia University, 1989.), 5, 14.
[142] Ibid. 38.
[143] Géza Hahn, *A magyar egészségügy története*, 97.

wrote in 1908, that tenements, department stores and factories attracted the people in the countryside who moved to the towns, not knowing the miseries and moral filth behind the glittering surface. They became strangers in the city, being deprived of the feeling of homeland.[144]

Table 2 – The rate of population density (person per 100 rooms)

	Budapest	National average	Kőbánya
1920	233	287	272
1930	213	259	275

Source: Géza.Hahn, *A magyar egészségügy története* (The History of Hungarian Medical Care), (Budapest: Medicina Könyvkiadó, 1960.), 97.

As can be seen from Table 2, the measure of overcrowding was the lowest in Budapest compared to the national average and the outskirts of the capital. The proportion of the national average and of the outskirts was also considerably higher than the figures of the capital 10 years earlier.

The above-mentioned figures show that in some suburbs of Budapest living conditions were nearly as bad as in villages. In terms of available public utilities and housing conditions, Óbuda, Kőbánya, Angyalföld, Kiserdő in Ferencváros, Jeruzsálem-district in Lágymányos and the Bíbic-settlement were the worst.[145] As a response to the situation, a social program was outlined, which included the building of Auguszta, Valéria and Wekerle settlements. Nevertheless, in the beginning of the 1920s some workers in these places still lived in barracks, camps and railway carriages.[146] Hence, steps were made to improve the health conditions of these territories. By the Second World War, the health service became comprehensive and diversified. New types of health centers, district specialist physicians' offices, infant and mother-care institutions, tuberculosis centers and venereal clinics were

[144] Andrew Lees and Lynn Lees (eds.), *The Urbanization of European Society in the Nineteenth Century*, 73.
[145] Géza Hahn, *A magyar egészségügy története*, 97. Tibor Bakáts, *Budapest közegészségügyének száz éve, 1848-1948* (Hundred Years of Public Health in Budapest, 1848-1948), (Budapest: Budapest Székesfőváros Irodalmi Intézete, 1948.), 159.

established. These institutions provided care for 10-12 thousand patients every month, for 70% of all infants in Budapest and also offered pulmonary screening for 85 thousand enrolled students.[147] In addition, from the interwar years, sanatoriums, laboratories and MÁV provision hospitals helped to improve the health status of workers in Budapest.[148] Besides, the Hungarian social policy system was introduced quite early in Europe by adapting Western-European, and especially German model. Being insured meant a more stable position and enhanced further the better health condition of workers. By the interwar years in Hungary compulsory insurance against sickness and old age were introduced with an increasing coverage.[149] In four years the number of insured in Budapest district insurance offices, transport-, tobacco-, other entrepreneur- and private-insurance offices almost doubled from 669 197 to 1072 694 between 1924 and 1927.[150]

As Andrew Lees argues, the industrial urban scene was different from the pre-modern era. Industrialization brought physical and social implications that resulted in mental and economic destruction for people. In Lewis Mumford's understanding, industrial cities are characterized by factories, railroads, slums, destructive social life and uncontrolled, aimless expansion.[151] In 1926, a survey was carried out in 532 factories in Budapest in order to judge the health conditions of workers in industrial circumstances. According to the published results, in 14 cases out of the 532, presence of toxic gas, smoke, dust and stink was traceable. The physicians found 2 cases of lead poisoning, 3 patients with conjunctivitis, and one with

[146] Károly Kapronczay, *Fejezetek 125 év Magyar közegészségügyének történetéből*, 45.
[147] Tibor Bakáts, *Budapest közegészségügyének száz éve, 1848-1948*, 158.
[148] Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten* (The social and economic conditions of the working class in Budapest), (Budapest: Budapest Székesfőváros Statisztikai Hivatala, 1930.) 583-586. Kornél Scholtz, *Magyarország kórházai és más gyógyintézetei az 1940. évben*, 5.
[149] Dorottya Szikra,˝The Thorny Path to Implementation: Bismarckian Social Insurance in Hungary in the late 19th Century" in *European Journal of Social Security* 6, no.3 (2004): 255-272. Tomka Béla, *Szociálpolitika a 20. századi Magyarországon európai perspektívában* (Social Policy in 20th century Hungary in a European Perspective), (Budapest: Szazadvég Kiadó, 2000). Susan Zimmermann, ˝Geschützte und ungeschützte Arbeitsverhältnisse von der Hochindustrialisierung bis zur Weltwirtschaftskrise. Österreich und Ungarn im Vergleich˝ in Andrea Komlossy, Susan Zimmermann (eds.), *Ungeregelt und unterbezahlt. Der informelle Sektor in der Weltwirtschaft* (Frankfurt/M.–Wien, 1997), 87-115.
[150] Illyefalvi, Lajos. *A munkások szociális és gazdasági viszonyai Budapesten*, 520-523.

dental problems out of every thousand workers and 9 factories were not supplied with drainage. In terms of dining rooms and bathrooms the situation was much worse, as in 253 cases none of them were provided, while 15 factories had only a dining room, 139 only bathrooms and 125 both. Only 40 factories were in possession of a shower, baths or bathing-pool. Drive-pipes were accessible in 519 factories, while only 24 surgery rooms, 2 sick-rooms, 2 nursing rooms, 1 day-nursery and 1 infant and mother care room were available in the 532 factories. 29 places were equipped with workers' lodgings and 71 families were provided with accommodation. In 43 factories night-shifts existed. As for the entertainment of the workers, 19 playing-fields, 5 worker casinos, 3 movies and one male-choir existed. These results show that more factories were well-equipped to provide healthy circumstances than would seem at first glance, however sanitary and working conditions were to be improved in every case. In view of this description, Sydney Pollard's and His-Huey Lang's argument should be taken into consideration. They claim that despite the bad living circumstances, cities were still a place of progress, dissemination of high culture and places that provided economic, social and cultural opportunities thus helped workers to become integrated into the urban environment.[152] The question is whether these statements are true for Hungary or not.

Despite the bad living conditions in cities, the improvement of health care was a great advantage as opposed to villages. Nevertheless, the countryside also had some positive features, which were, however, insufficient to counterbalance the better health care system in towns and in the capital. Fresh air, varied diet, home-grown vegetables contributed to the health of mothers in the countryside and resulted in fewer unviable infants.[153]

[151] Andrew Lees and Lynn Lees (eds.), *The Urbanization of European Society in the Nineteenth Century*, XII-XIII.
[152] Andrew Lees and Lynn Lees (eds.), *The Urbanization of European Society in the Nineteenth Century*, XV.
[153] József Melly, "Budapest csecsemőhalandósága nemzetközi megvilágításban" (Infant Mortality of Budapest in International Comparison) *Városi Szemle* 14, no.4 (1928): 638. Peter Scholliers and Frank Daelemans, "Standards of living and standards of health in wartime Belgium" in Richard Wall and Jay Winter (eds.), *The Upheaval of War* (Cambridge, 1988), 151.

Hungary was one of the countries with the worst mortality and infant mortality rates in Europe. In 1910, infant deaths were 30%, while children mortality under 5 years of age was 48%. In the same year, the average life-expectancy was 27.5 years.[154] In the first decades of the 20th century, only 30% of the Hungarian population lived in municipal and other towns,[155] the other 70% were inhabitants in rural areas. In addition, the infant mortality rate in villages exceeded those results in the towns by 30%.[156] The figures in Table 3 below demonstrate the influencing factor of the previously mentioned differences between Budapest and the countryside in terms of living conditions and available health care system. The better-equipped institutions in the capital along with the higher level of education among its inhabitants resulted in lower infant mortality rate.

Table 3 – Infant mortality rates in interwar Hungary (infant deaths per 100 live-born)

	Budapest	National average of counties and municipalities
1920	18.1	19.3
1925	12.4	16.7
1930	11.3	16.2
1935	11.9	13.9
1940	10.3	12.6

Sources: *Magyar Statisztikai Évkönyv* (Statistic Yearbook of Hungary), Új Folyam, volumes XXVII-XLIX. (Budapest, Az Athéneum Irodalmi es Nyomdai Részvénytársulat könyvnyomdája, 1925-1943.), passim. Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XIII-XXX, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1925-1942), passim.

Infant mortality rates in Budapest were better than in the countryside, though differences also existed within Budapest, among the districts and according to flat-size. The 1st, 2nd, 4th

[154] Károly Kapronczay, *Fejezetek 125 év Magyar közegészségügyének történetéből*, (Chapters from the 125 years History of Hungarian Public Health), (Budapest: Semmelweis Orvostörténeti Múzeum, Könyvtár és Levéltár, 2001.), 42.

[155] According to the census in 1930, 2 881 251 people lived in towns out of the total population of 8 688 319. (*Magyar Statisztikai Évkönyv*, 1937, 8-9.)

[156] Lajos Keller, "A falusi anya-és csecsemővédelem," (Mother and Infant Care in Villages), *A Falu. Falufejlesztési és népművelési havi folyóirat. A Faluszövetség hivatalos lapja* 11, no. 12 (1930): 332.

districts had the best results as early as 1921 while the infant mortality rate in the 3rd, 6th, 9th and 10th districts was higher (See Appendix Table 3 and Map 2). The districts with the best results can be found in Buda and in the inner city on the Pest side with 8-10% infant mortality rate, while infant mortality results were worst on the Pest side, near the big boulevards, in Terézváros, Erzsébetváros and Józsefváros was between 14-17.5%.[157] By 1940, the tendency remained the same, with the 9th and 10th (Kőbánya) districts having the worst results, followed by the 3rd, 6th and 8th districts. In 1940 infant mortality rate was 4% in the 1st and 2nd district, while 6% in the 5th, 11th and 12th districts compared to 12% in the 10th district.[158] These two and threefold differences were due to social groups and their flat conditions. To some extent social segregation also existed in Budapest, as 80% of the middle class lived on the Pest side, in the 6th to 9th districts, the other 20% in the villas in Buda, while the working class lived in the poor suburbs of Kőbánya, Angyalföld and Óbuda.[159] It is also visible from these data that differences between districts and their infant mortality rate got higher by 1940 with results spread on a broader scale.

Based on data in the *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, it is possible to explore the composition of the district population in terms of religion and thus find explanation for the diverse infant mortality rate not only according to flat circumstances but also according to the socio-economic position of families. As it follows from the data, in 1925 and 1930, in the districts with the best results, mainly Roman Catholics, Calvinists and Jews lived, though with strong Catholic majority, while in the districts with the worst infant mortality rate also Roman Catholics, Calvinists and Jewish population were in a majority. It has to be added though that in the 10th district with the highest infant mortality rate, Jews were clearly underrepresented. Greek Catholics, Orthodox and Unitarians were in a minority in all

[157] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1925-1942, passim.
[158] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1925-1942, passim.
[159] Gábor Gyáni, *Parlor and Kitchen: Housing and Domestic Culture in Budapest, 1870-1940*, 127.

districts with a relatively balanced infant mortality rate in all of the districts.[160] Besides, the composition and size of the flat would give a more precise picture of the correlation between infant mortality according to religious groups and district. Jews had the best flats with a high proportion (34.6%) of 3-5 rooms, followed by the Lutherans. Above 85% of the Calvinist, Roman Catholics and Orthodox population lived in 1-2 room flat only with 13-14% of them having 3-5 rooms.[161] The best flat conditions of the Jews can be seen from these data.[162]

In addition, the *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* help to map the flat characteristics in each district of Budapest like the location and size of the flat. According to the data from 1930, flats, especially in the 4th, 5th districts but also in the 1st and 2nd districts situated mainly on one of the upper floors, while only 20% of them were situated downstairs. As opposed to them, in the 3rd and 10th districts 72-80% of the flas were to be found downstairs.[163] Living in basement flats and cellars was a source of danger for infants as they were more exposed to epidemic diseases in those damp flats, while living on upper floors meant better hygienic conditions and consequently, better chances for infant survival. The size of a flat is another variable that could influence infant mortality rate and that could be measured by the number of rooms. Data once again showed the advantageous position of districts in the Inner city and Buda where the biggest flats could be found with the highest proportion of 3-5 room flats and sometimes even 6-9 room flats as well.[164] Besides, yearbooks also provide data on the available public utilities in flats (Appendix Table 4). The most equipped and modernized flats can be found in the 4th, 5th, 1st and 2nd districts where the highest proportion (88-90%) of running water can be found while in the 3rd district only 41% of the flats had this opportunity and 56% in Kőbánya.[165] Having running water is also crucial

[160] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1927, 1933, pp. 51, 28.
[161] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1927, 1933, pp. 51, 28.
[162] Chapter 4.3 deals with further analysis of the better infant mortality rate of the Jews.
[163] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1933, 23.
[164] Ibid, 23.
[165] Ibid, 24.

from the point of view of washing infants therefore the lack of this opportunity in many flats in the 3rd, 6th and 10th districts explain their worse infant mortality rate to a some extent. In addition to running water, the presence of gas, electricity, central heating and hot water enhanced further the survival chances of infants. Similarly, to the previous results, the 4th and 5th districts were the best covered, followed by the 1st and 2nd districts, while in the 3rd and 10th district only a minority of flats could afford such wervices. Compared to the 4th and 5th districts, only one-third and one-fourth of the flats in the 3rd and 10th districts had gas and electricity and even less than that in case of central heating and hot water. Though it also had to be added that with central heating only 10% of the best districts were provided.[166] Besides, the district-specific data on the proportion of flushing toilets is available also. In the best district, their proportion was 65-70%, while in the 6-10th district only 45% and in the 3rd district an exceptionally low level of it is observable with only 26% of the flats having flushing toilets.[167] So far, the observation of flat modernization indicators proved the advantegous position of the 1st, 2nd, 4th and 5th districts which correlates with the districts having the lowest infant mortality rate in the interwar period (see Appendix Table 3). Flats in the 3rd, 6th and 10th districts were the less modernized in terms of public utilities and having also the highest rate of infant mortality.

In addition, other conditions of flats can be examined as well, being equally important in spreading diseases. Due to the careful and thorough data compilation in the interwar years, the state of walls and floor were registered according to districts. In terms of floor coverage, the expensive but good quality parquet floor were to be found in 66.9% in the 4th, 5th districts, followed by the 1st and 2nd districts, while only 9.7% of flats in the 10th district were covered by this material. The majority of flats in the poor districts of Pest suburbs (86.9%) had strip

[166] Ibid, 24.
[167] Ibid, 24.

floor, while it can be found only in 40.5% of the flats in the 5th district.[168] Besides the floor, the walls also reflected the quality of homes. In case of the wallpaper, in the 5th districts 20-25 times more flats were covered with it than in the 3rd or 10th districts. Nevertheless, still the painted and whitewashed walls were the most widespread, especially in the 3rd and 10th districts.[169]

Comparative analysis of district-specific flat variables proved the better condition of flats in the 4th, 5th, 1st and 2nd districts and the much worse situation of the 3rd, 6th and 10th districts. The 7th, 8th and 9th districts were between the two extreme results. Mapping the flat conditions in each districts proved the existing differences among parts of the city as well as the importance of flats in infant survival. In the following, the homes of workers and the middle class will be examined closer, along with the demographic effects of residency. Therefore, the first question is in what circumstances those infants lived, who died in 1921 in Budapest suburbs.

2.3 Infant death in interwar Budapest flats

Due to increasing industrialization, urban society was polarized and divided into working class and elite groups. Aristocrats, especially those involved in politics moved to the capital and lived in the luxurious quarters around the National Museum and Castle Hill. Another part of the inhabitants of Budapest belonged to the middle class, which consisted of entrepreneurs, teachers, lawyers, doctors, private employees and intellectuals. The majority of the population, however, was made up of industrial workers and domestic servants. Their living circumstances determined also their health conditions and demographic behavior. The state had a significant role in metropolitan development. Due to the great concentration of people in a limited space, the danger of epidemic outbreaks had to be handled and a proper

[168] Ibid, 24.

infrastructure had to be provided, which was successful in some districts and less successful in the suburbs.[170]

"It is hardly possible to make use of space better than poor people do in their homes, it is hardly possible. Without any inner construction, only by creative and practical divisions, they use the same room as bedroom, living room, workshop and even as animal shed."[171] Besides, Márai continues, "The only luxury which they had to relinquish, is the luxury of solitude. It is very rare for a poor person to be alone. Poor people always live together with other poor people, possibly with more and more people, together, at the same time, under the same roof. Very often they invite guests to sleep in a room where already six people have are sleeping."[172] Descriptions in literary works are good illustration for the living circumstances of workers, emphasizing the disadvantages of overcrowding. Between 1880 and 1935 the number of flats more than tripled in Budapest, from 68,535 to 259,454 flats. Nevertheless, flats with 1 or 2 rooms still dominated, with the majority of the population living in these small flats. In 1935, 81% of the flats had one room or only 1 or 2 bedrooms.[173] In 1925, in 20.4% of the flats 6-10 people lived and more than 50 flats existed with 20 inhabitants. In 1925, ten flats were also registered with 30 inhabitants and one flat with 41-50 inhabitants.[174] Though these are marginal cases, the tendency can be seen. Through the example of Victorian British cities, Lees shows that medical doctors were aware of the dramatic consequences of urban density as early as the 1840s. Moreover, the British turned to rural nostalgia, partly due to the travel stories of William Cobbett. Cities were exposed to hostility and were accused of

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[169] Ibid, 24.
[170] Gábor Gyáni, *Parlor and Kitchen: Housing and Domestic Culture in Budapest, 1870-1940* (Budapest: CEU Press, 2002.), 8-15.
[171] "Jobban kihasználni a tért, mint ezt a szegények teszik lakásaikban, már alig lehet, s beépítés nélkül, egyszerűen csak szellemes és gyakorlati beosztással, egyidejűleg használják a szobát hálónak, társalgónak, ebédlőnek, sőt műhelynek és ólnak is. [Sándor Márai, *A szegények iskolája* (The School of the Poor) (Budapest: Helikon kiadó, 2006.), 49.]
[172] Az egyetlen fényűzés, amelyről le kell mondaniuk, a magány fényűzése. A szegény igen ritkán van csak egyedül. A szegény mindig több szegénnyel él, minél többel, együtt és egyszerre, közös fedél alatt. Gyakran hívnak alvóvendéget az egyetlen szobába, ahol már hatan alusznak." (Márai, *A szegények iskolája*, 50.)
[173] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1937, 28.

destroying the healthy population and were regarded as 'tumors in the social organism'.[175] In the words of Adolf Weber, city-dwellers had a "life of a feeble and neurotic man".[176]

The basic requirements of acceptable housing conditions with fresh air, drainage and adequate water supply were not entirely fulfilled in workers' home, not even after the enforcement of the 1876 public health law.[177] Infants had to live in flats, where if more rooms existed, 1 or 2 rooms were rented and sometimes 6-7 children had to share one room, also often because the family could not afford to provide heating in more rooms.[178] In Budapest, more than 700 one-room flats existed, where 5-6 lodgers lived also besides the family.[179] According to a survey made in December 1929, 69.5 % of families shared their flat with strangers. In some extreme cases workers lived in the same room with their dependants and 4-8 lodgers, without any wage-earner family members. On the day of the survey, 15.8% of those being asked were in this situation, involving only 2 women from the 710 cases. In some cases the situation was even worse, when widows or divorced people remained alone with children and with numerous lodgers in their flats, sometimes without any wage-earner family member, though they constituted only 1-5% of those have been surveyed.[180] Besides density, the composition of the living population was also problematic as sometimes pregnant or confined women and children were in the same place with animals or according to a chronicle from the Horthy era, even with lay-out corpses.[181] Only in 1919 was a law enforced, which inhibited corpses being laid out in flats.[182]

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[174] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1926, 139.
[175] Andrew Lees, *Cities Perceived*, 17.
[176] Andrew Lees and Lynn Lees (eds.), *The Urbanization of European Society in the Nineteenth Century* (London: D.C. Heath and Company, 1976.), 78.
[177] Andrew Lees, *Cities Perceived*, 22-23.
[178] József Melly, "Budapest csecsemőhalandósága nemzetközi megvilágításban", 664.
[179] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1926, 139.
[180] Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten*, 772.
[181] Magdolna Bezerédyné dr. Hertelendy, *Évszázados küzdelem hazánk egészségügyéért*, 55.
[182] Péter Hanák, *A kert és a műhely* (The Garden and the Workshop), (Budapest: Balassi kiadó, 1999.), 58. The 1876/XIV law of public health prohibited lay-out corpses in flats as part of regulating life in the city. These laws were, however not kept in every case. (Károly Kapronczay, *Fejezetek 125 év Magyar közegészségügyének történetéből*, 39.)

Respectively, infant mortality rates were worse in the outskirts among the poor population. Overcrowding and lack of fresh air in basement flats, allowed the easy spread of epidemics and infectious diseases, lack of proper health care, and infants had less chance of survival. Statistical data compiled by Lajos Illyefalvi show the infant mortality rate in Budapest, according to the category of wealth. Throughout the 1920s, the result was the same, as 93.9% of infants died in the poor layer of society, while 6.1% among the middle class and only 0.2 % in wealthy families (see Appendix Table 5).[183]

According to a contemporary account, a typical working class home for miners looked like the following: "My dear Juliska had done everything for her family to avoid dying of hunger. In miner homes one room and one kitchen were provided. Near the house, one small garden was granted to every family. Juliska worked in the garden from early dawn, trenching, hoeing and singling to obtain vegetables and potatoes."[184] In the outskirts of Budapest, living conditions were not satisfactory due to population growth and higher rate of overcrowding. As opposed to the decreasing tendency of population density from the 1930s, in the outskirts the proportion of overcrowding became even higher.[185]

Illegitimate children were in the worst position, often those with a mother being a domestic servant. These mothers had no chance to take care of their child therefore they were forced to send their infants to wet-nurse. Due to the small amount of salary, these infants were taken care of carelessly with the result that every 5th illegitimate child died.[186] However, the situation of poor mothers was improved by the foundation of mother and infant care

[183] Based on data from Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1921-1929, passim.
[184] "Juliskám is mindent megtett, hogy ne haljunk éhen. A bányatelepi lakásokban egy szoba és egy konyha volt. A ház alatt pedig egy kis kertrész illetett meg mindenkit. Juliskám kora hajnalban már kint dolgozott a kertben, felásta a földet, krumplit, kapált, egyelt, gyomlálgatott, s megszerezte a főzeléket és a krumplit." (Tibor Barabás, *Egy bányász élete* (Life of a Miner) in Tibor Barabás, *Aranyfácán* (Gold Pheasant), (Budapest: Magvető kiadó, 1968.), 45.)
[185] Géza Hahn, *A magyar egészségügy története*, 97.
[186] Gábor Gyáni, *Család, háztartás és városi cselédség* (Family, household and the Urban Domestic Servant), (Budapest: Magvető Kiadó, 1983.), 214-216. Jenő Rédei, "A halandóság alakulása Magyarországon," (Mortality Rate in Hungary) *Demográfia* 2, no.1 (1959): 87.

institutions in the 1920s, by the *Stefánia* Association and other charity organizations, such as the Márta Association and the Saint Zita Circles.[187]

An entirely different setting co-existed with worker homes, the luxurious flats of the middle-class. This social layer was diversified also, and their living conditions varied according to differences in income and professions, but in general, infants had increased chances in better-equipped middle class homes. Added to this, the different life-style of the middle-class, the available help and more time spent educating and caring for children had a result of 1-5% infant mortality rate in 1921 compared to the average 15% in the suburbs.

From the 1880s, new types of tenement houses were built next to the Great Boulevards and Andrássy street. It is evident from the research of Péter Hanák that the owners of these houses were mainly aristocrats, barons and members of the trader-entrepreneurial middle class, who lived in villas in the Inner City, while having renters in their tenement houses. Based on the available list of inhabitants, Hanák came to the conclusion that mainly members of the petite bourgeoisie, private and state officials, and industrialists rented flats in these houses.[188] In 1935, hundreds of flats existed with 6 to 10 lodgers and in more than a hundred flats, 4 to 7 rooms were let for rent.[189] Hanák observes that flats on the first floor had the greatest prestige, especially if they looked on the street. It was occupied mainly by the aristocrats, while the second floor by the middle class. Statistical data gathered by Lajos Illyefalvi demonstrates that 24.8% of middle class homes were situated on the first floor and 21% on the second floor.[190] Tenement houses near the great boulevards were divided according to social hierarchy. The number of floors and distance from the street marked the prestige of the flat.[191] Workers mainly lived in flats situated in cellars or attics, 58% of

[187] Gábor Gyáni, *Család, háztartás és városi cselédség*, 232.
[188] Péter Hanák, *A kert és a műhely*, 29.
[189] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1936, 35.
[190] Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai* (Social and Economic Circumstances of the Middle Class Population in Budapest), (Budapest: Budapest Székesfőváros Statisztikai Hivatala 1935.), 186.
[191] Péter Hanák, *A kert és a műhely*, 32.

worker's home were to be found in cellars, basements, attics and downstairs,[192] while among middle class homes only 0.14 % were situated in cellars, basements and in the attic and 29.5% downstairs.[193] It is evident, according to the data that higher social standing resulted in a flat on the 1st to 3rd floor, where hygienic conditions were better (see Appendix, Table 6).

In middle class homes, the private sphere, representative rooms and service rooms were clearly separated, especially the space of domestic servants. The middle class aimed at creating a private sphere, and put emphasis on individualization.[194] This is a sharp difference compared to worker homes with an average 5-6 people living in one room, sometimes even without close ties. Márai writes: "A lodger mentioned to me in Berlin that once he slept with a stranger in the same bed, on the second floor of a house in Bülow street, with more people in the room without even introducing themselves to each other."[195] The middle class type of household management was entirely different from this picture, which also had an effect on children. In a minimal middle class home with 3 rooms, children slept in the parents' room while young, later they had to move to the living room. In more luxurious and spacious flats, besides separate women's room, study room, library, a separate room was also created for children. The sign of privatization tendencies and individualization can also be traced in this behavior. The middle class recognized and appreciated the desire for private sphere and tried to provide age-specific conditions in children's rooms. In some wealthier families, separate boy and girl rooms were created.[196] "A few weeks after the death of the child, I came home from the cemetery one afternoon. I went to the child's room. My husband stood there in the dark room. This room was furnished by him. He selected personally every piece of furniture, he organized everything and he even planned the exact place of the furniture. Nevertheless, he

[192] Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten*, 137.
[193] Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai*, 186.
[194] Péter Hanák, *A kert és a műhely*, 37.
[195] "Egy ágyrajáró említette nekem Berlinben, hogy hónapokig aludt idegen emberrel közös ágyban, a Bülow utca egyik házának második emeletén, többedmagával közösen lefoglalt szobában, anélkül, hogy egyszer is bemutatkoztak volna egymásnak." (Márai, *A szegények iskolája*, 50.)
[196] Péter Hanák, *A kert és a műhely*, 36.

rarely came here while the child was alive."[197] Middle class values are well presented in this quotation. It shows material goods, parent roles, the distinguished position of the child and also the emotional distance.

The middle class had other opportunities for child care that were not possible in working class families, including help of family members and access to health care. "We traveled to Meran. My mother-in-law for that time – according to the rule and tradition – moved to our flat. She took care of the baby."[198] Another example illustrates opportunities in available health care infrastructure and the role of the middle class mother in infant care: "The child was treated by the best medical doctors in the city, you bet. I sat near his bed for 8 days, I slept in his room, I nursed him, I was the one who ignored doctors' moral ethics and asked for another physician when the first one, then the second one could not help. Everything was tried, yes."[199]

Furthermore, an equally important characteristic of middle class homes was the presence of domestic servants. They also helped the mothers to save time for being with the baby instead of working. At the turn of the 20th century, a quarter of middle class homes kept domestic servants, usually households with 1 or 2 servants were widespread. Differences existed though, according to professions. 7 families out of 10 from the intellectual class kept a servant, while only 4 among those working in industry and trade, and only 2-3 among those living from their own fortune.[200] The 4th, 5th, 6th, 7th and 8th districts were the most widespread households with domestic servants[201], along Andrássy street, the aristocratic palaces next to

[197] "Néhány héttel a gyerek halála után egy délután hazajöttem a temetőből, s bementem a gyerekszobába. A sötét szobában ott állott a férjem. Ezt a szobát ő rendezte be. Minden bútordarabot személyesen válogatott, ő rendezett el mindent, még a bútorok helyét is kijelölte. Igaz a gyerek életében ritkán lépett be ide." (Márai, *Az igazi*, 43.)
[198] "Elmentünk Meránba. Anyósom erre az időre – szabályosan, ahogy ez szokás – lakásunkba költözött. Vigyázott a kicsire." (Márai, *Az igazi*, 36.)
[199] "A gyereket a város legjobb orvosai kezelték, gondolhatod. Ott ültem nyolc napon át a gyerek ágya mellett, ott aludtam, én ápoltam, én voltam az, aki fütyült az orvosi etikára, s hívott más orvosokat, mikor az első, a második nem tudott segíteni. Minden megtörtént, igen." (Márai, *Az igazi*, 44-45.)
[200] Gábor Gyáni, *Család, háztartás és városi cselédség*, 35.
[201] Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten*, 666.

the big boulevards and from the interwar years, in villas in Gellérthegy, Szabadsághegy and Lágymányos.[202]

Compared to worker homes, middle class flats were more spacious and better-equipped. According to a survey made in 1925, the most typical flat size was 2 or 3 rooms, however, in 11% of the cases 4 rooms, in 3.4% of the cases 5 rooms, 14% of the cases flats had 6 rooms were available, though with slight occupational variations (for exact details, see Appendix, Table 7). Flats with 2 to 5 rooms were the most common, while only under 1% of the cases can 9 to 14 rooms be observed, though this pattern existed too.[203] Nevertheless, it also has to be mentioned that among middle class flats with one or two rooms, the average density was 2 persons per room, while in the case of greater flats, it reduced to one person per room. Among the private employees, for example, in 850 flats with 6 rooms, lived 4906 inhabitants, which is 1.03 persons per room or among state officials, in 2720 flats with 4 rooms, lived 14,025 person, which is 1.2 persons per room.[204] Surprisingly, state officials had highest density which shows that state benefits were not manifested in a way of better flat provision. As for the convenience of the flats, it has to be added that on average 35 % of the cases the flat was equipped both with kitchen, bathroom and a separate room for domestic servants.[205]

In the interwar years, the upper strata of the Hungarian middle class homes were equipped with bathrooms, in 90% of engineer flats running water, electricity, gas and flush toilets were available.[206] Consequently, better-equipped middle class homes provided a healthier environment. According to a survey among engineers, 89% were not ill in 1929. Moreover, approximately 50% of engineers, lawyers, physicians had a phone, library, newspaper subscription, domestic servants and the opportunity to travel abroad. The 1929

[202] Gábor Gyáni, *Család, háztartás és városi cselédség*, 39, 47.
[203] Ibid, 189.
[204] Based on data from Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai*, 185.
[205] Ibid.

survey contained a separate questionnaire, about what habits the middle class had to give up due to the First World War. According to the answers, a majority of the middle class kept fewer automobiles, went abroad fewer times and did not have that many entertainment facilities, however, they kept going to sport activities and kept their domestic servants, so the war had no influence on their health.[207] In interwar years, members of the middle-class in Budapest had increasingly better living circumstances which explain their better infant mortality rates. Though it had to be added that engineers and lawyers constituted the upper layers of middle class with a progressive mind and the best equipment, nevertheless it illustrates the existing differences in residential circumstances.

Differences existed in interwar Hungary between urban and rural areas and in worker and middle class homes, in terms of living conditions and as a consequence of these, also in infant mortality rates. Budapest had a better infant mortality rate than the countryside, however some parts of Budapest were in a devastating condition, like the 6th, 7th, 8th districts as well as the suburbs of Kőbánya or Óbuda with industrial slums. The worst problems of overcrowding, spreading of infectious diseases and poverty had not yet been solved before the Second World War. Quiet the contrary, in the Inner City and Buda, middle class homes were provided increasingly with space, better services as well as additional luxuries. Differences in this polarized society were also reflected in infant mortality rates. According to the conclusion of Adolf Weber, the inner reformation of men by transforming the human character, should be the foremost aim in the fight to overcome urban and rural miseries, instead of changing external circumstances only.[208] Development was needed in institutional expansion as well as in educative and preventive work. Aims were made to involve especially the provincial population and workers in health education. In the next chapter the role of available health infrastructure and its effect on infant mortality rate will be analyzed, along with the attempts

[206] Ibid, 185, 1048.
[207] Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten*, 998-1004.

made by health visitor organizations to spread health knowledge and conduct a preventive work in order to reduce infant mortality.

[208] Andrew Lees and Lynn Lees (eds.), *The Urbanization of European Society in the Nineteenth Century*, 83.

3. THE ROLE OF THE HEALTH AND INFANT CARE INFRASTRUCTURE

3.1 The available health infrastructure of Hungary

Historical demographic studies documented the accelerated decline of infant and child mortality after the First World War. A variety of explanations were given to this phenomenon. Some scholars emphasized the role of living conditions including improved nutrition, higher standard of personal hygiene, better water supply, better quality of food and the quality of housing conditions. From the 1970s, others, like Ivan Illich and Thomas McKeown, attributed the decline to the increased medical knowledge and to the better information of mothers about hygiene.[209] As opposed to them, some scholars argued that before 1890 medical measures had little role in changing demographic patterns, involving infant and child mortality. They rather stressed the impact of social and economic changes.[210]

The period of the demographic transition is important in this respect also, as this was the time of increased medical involvement in childbirth and infant care. Previously, knowledge was transmitted from mothers to daughters. Added to this, wet-nurses and midwives were the main helpers of mothers. Construction of health infrastructure therefore required mental changes, firstly the increased interest of physicians towards small children and secondly the changing attitude of mothers to accept medical help.[211] The majority of infant deaths were due to diseases, among which the most widespread were illnesses of the digestive system, respiratory and endemic diseases, smallpox and diphtheria. Marie-France Morel examined to what extent medical science was able to improve mortality rates between 1750 and 1914. In case of France, he argues, as a result of the innovations introduced by

[209] Marie-France Morel, "The Care of Children: the influence of Medical Innovation and Medical Institutions on Infant Mortality 1750-1914" in Roger Schoefield et.al (eds.), *The Decline of Mortality in Europe* (Oxford: Clarendon Press, 1991), 196.
[210] Ibid, 196.
[211] Ibid, 197.

Louis Pasteur, and the medical revolution that followed, a significant infant mortality decline can be observed between 1890 and 1914. With this example he argued for the role of medicine and physicians in infant mortality decline.[212]

Infant mortality had a lot to do with public hygiene also, especially as newborns were more exposed to epidemics. Some crucial elements of public hygiene were introduced first in cities such as clean piped water, disposition of sewage from homes, disinfected food and paved, clean street.[213] Public hygiene affected people's lives on different levels, including their home, workplace and places of public assemblies. Public hygiene requires social responsibility and intervention that might be politically rewarding. Moreover, advances were to be made first in places where an elite group was affected and involved.[214]

Modernization in Hungarian health care started with the 1876/XIV Public Health Law. The idea of prevention had appeared first in this law as a response to a survey made right before the enforcement of the law. Those data prove that Hungary had one of the worst infant mortality rates in 1872 in Europe with 50.8% mortality rate among the 0-5 year old children.[215] After the enforcement of the law, changes began, due to the increasing financial support and realigning of medical training. The Ministry of the Interior was given authority over public health issues. As a consequence, the establishment of hospitals, pharmacies, cemeteries and other health care institutions, even industrial health were dependent upon the permission of the Ministry of the Interior. On the second degree, public health administration belonged to the mayors in counties, and to the city councils in municipalities.[216] The 1876 law meant the break-through in health statistics also, as yearly ministerial statistic reports were

[212] Ibid, 197.
[213] Ibid, 233.
[214] Ibid, 236.
[215] Károly Kapronczay, *Fejezetek 125 év Magyar közegészségügyének történetéből*, 51.
[216] Károly Kapronczay, *Fejezetek 125 év Magyar közegészségügyének történetéből*, 6-7.

submitted about fertility, mortality rates, about epidemics, medical staff and pharmacy issues. The availability of these figures facilitated medical research.[217]

The 1876 law enacted decrees that had long-lasting influence and transformed the previously existing health care system. After the short Communist takeover in 1919, public health issued belonged to the Ministry of Public Health, then to the Ministry of Public Welfare. State secretaries of health, András Fáy, Kornél Scholtz and Béla Johann introduced efficient novelties in the health infrastructure of Hungary. In 1927 the National Public Health Institution was established that built up a national laboratory network to diagnose and report every infectious disease. Besides, it organized compulsory immunization, expanded training of nursery-school teachers, made plans to improve water-supply of villages and founded schools for health care promotion.[218] The National Public Health Institution was in force until 1945 and it had also its counterpart in the capital, the Budapest Public Health Institution which aimed at improving the hygienic conditions in Budapest.[219] A large scale preventive and informative movement was organized by József Fodor. He introduced hygiene, health care and physical education as subjects in school curriculums along with first-aid trainings and journals with the title *Health* and *Library of Health*.[220]

Besides Budapest, the National Nursing Fund aimed at establishing state hospitals in the countryside also, it lasted long however, to win the trust of the village population. Before the First World War, a quantitative and qualitative development can be observed in cities. The number of beds increased with 62.1%, while high-standard university clinics were established in Pécs, Debrecen and Szeged that became the centre of provincial health care. In the next wave of improvement, the hospitals of Szombathely, Győr, Székesfehérvár, Kaposvár, Szekszárd, Balassagyarmat, Miskolc, Nyíregyháza, Gyula and Hódmezővásáhely were

[217] Magdolna Bezerédyné dr. Hertelendy, *Évszázados küzdelem hazánk egészségügyéért*, 63.
[218] Károly Kapronczay, *Fejezetek 125 év Magyar közegészségügyének történetéből*, 11.
[219] Ibid, 12.
[220] Ibid, 23-24.

founded that attracted excellent specialists and became successful in promoting the necessity of institutional treatment to the people in the countryside.[221] These hospitals covered the whole territory of Hungary. The majority of Hungarian hospitals were state-founded and funded, but municipalities, churches, social organizations, private investors and health insurance companies also had their share in maintaining hospitals.[222] The majority of hospitals were maintained by the state (33.9%), municipalities (38.3%) and social organizations (9.6%). (For exact details see Appendix Table 8.) Not only prestigious hospitals can be found in the countryside, but also other health care institutions that became famous and rivals to the capital. The 3 biggest tuberculosis sanatoriums were established by private investors in Budakeszi, Debrecen and Gyula.[223]

In the countryside the available health care staff increased also in number in the interwar years. The number of physicians and surgeons per 100 thousand inhabitants increased from 29.5 to 105.8 between 1906 and 1940. Besides them, the census and other sources provide data about the number of midwives, pharmacists and coroners. Their number did not change a lot. On average 64.7 midwives per 100 thousand residents were available between 1906 and 1940, while 15.3 pharmacists and 40.2 coroners between 1925 and 1940.[224] (See Appendix Table 9) The distribution of physicians was still unequal since one-third of them lived in the capital, while another third in provincial towns, which means that villages were not properly covered.[225] According to the census of 1930, 4684 physicians lived in municipal towns, while only 3601 in the countryside.[226] Data about the regional distribution of physicians in 1910 show that the highest number of them worked in the Great-Plain, while

[221] Kornél Scholtz, *Magyarország kórházai és más gyógyintézetei az 1940. évben* (Hungarian Hospitals and Other Health Care Institutions), (Budapest: Magyarország Klinikáinak és Kórházinak Szövetsége, 4.sz. kiadvány, 1942.), 7-8.
[222] Ibid, 6.
[223] Ibid, 7.
[224] *Magyar Statisztikai Evkonyv*, volumes 1915, 1927, 1938, 1940, pp. 65, 34, 41, 43.
[225] Károly Kapronczay, *Fejezetek 125 év Magyar közegészségügyének történetéből*, 47.

the least covered area by medical staff was North-East Hungary.[227] At the time of the census in 1910, the proportion of public health employees per 10 thousand inhabitants was the highest in Békés, Csanád, Hajdú, Jász-Nagykun-Szolnok, Nógrád, Gömör and Kishont and Moson, while the least provided area were Szatmár, Ugocsa, Bereg, Zala, Vas, Győr and Arad counties. It follows from these figures that no direct correlation can be found between the low infant mortality rate and the high proportion of physicians in a county. Already in 1910, Budapest had the highest amount of public health employee (37 / 10 thousand inhabitants) which increased further to 49 / 10 thousand inhabitants by 1930 compared to the national average of 13.7 public health employee for 10 thousand inhabitants.[228] By 1930, the main tendencies remained the same as the lowest proportion of public health employees could be found in Szabolcs, Szatmár, Borsod, Győr and Heves, while the best covered areas were Békés, Jász-Nagykun-Szolnok, Csongrád and Somogy (Appendix Table 10). Projecting the proportion of medical staff to the infant mortality rate of the counties shows that Békés, Somogy, Szabolcs and Szatmár counties had the highest infant mortality rate in 1921 even though they were well covered by medical staff. Similarly a surprising tendency can be found in the case of Zala, Sopron and Győr, where infant mortality rate was lower but their medical overage was low too. In the 1930s, however, the number of physicians, pharmacists and midwives corresponds better to the level of infant mortality as counties with the lowest infant mortality results are among those having the best medical coverage.[229] So, while in 1910, a marked pattern did not exist for the connection between medical coverage and infant mortality rate, by 1930 such correspondence can be pointed out. It proves also the very complex nature of infant mortality rate that is not possible to measure by one variable only, however the

[226] *Az 1930.évi népszámlálás*, IV.rész, A népesség foglalkozása a főbb demográfiai adatokkal egybevetve (The 1930 census. Part IV, Profession Data of the Population with Respect to the Main Demographic Data), (Budapest, KSH, Stephaneum Nyomda Rt, 1936), 147.
[227] Ibid, 148-150.
[228] Ibid, 147.
[229] *Az 1930.évi népszámlálás*, 148-150. *Magyar Statisztikai Évkönyv*, 1938, 22.

analysis of medical coverage adds significant information for the better understanding of this complex phenomenon. The 1930 census involves also detailed data for medical coverage of the country with having the three separate categories of physicians, pharmacists and midwives. It can be observed that midwives had the highest proportion in each county, higher than physicians but pharmacists had the lowest level per 10 thousand inhabitants.[230] In each case the much better results of cities is also evident, sometimes, as in case of Baja, Debrecen, Miskolc and Pécs the number of physicians were almost the double of that in the counties.[231] While between 1911 and 1915 only 52% of children died under 7 years of age received medical treatment previously[232], by the 1930s their proportion increased onsiderably. Still in 1930, however, in municipal towns on average 95% of children died under 7 years of age were treated by medical doctors. This rate was only 85% in the countryside.[233] These figures show the difference between urban and rural areas but also prove the growing medicalization of illnesses and medical treatment before death.

According to the statistics gathered by Kornél Scholtz, the health care coverage reached its peak in 1938, when 304 institutions were available with 48 898 beds, meaning an average of 540 beds for 100 thousand inhabitants.[234] By that time, provincial hospitals developed and diversified to a great extent. The number of hospitals with more than 100 beds rose to 67, with compulsory departments of internal medicine and surgery. In 75% of the cases additional departments of obstetrics, 60% department for contagious diseases, 53% dermatologist, 33.6% paediatrician and 29.4% ear-nose-throat department were added also.[235] In 1940 the rate of number of beds per 100 thousand inhabitants was still the best in Budapest. It exceeded 3-4 times the rate of available beds in other parts of the country. While in

[230] *Az 1930.évi népszámlálás*, 148-150.
[231] Ibid, 148-150.
[232] *Gyermekhalandóság és gyermek-fertőzőbetegségek az 1901-1915 években.* (Child mortality and Child Infecious Diseases in the years of 1901-1915). (Budapest: A Magyar Királyi Központi statisztikai Hivatal, az Athéneum Irodalmi és Nyomdai rt. Nyomása, 1921.), 45.
[233] *Magyar Statisztikai Évkönyv*, 1931, 1936, pp. 23, 27.
[234] Kornél Scholtz, *Magyarország kórházai és más gyógyintézetei az 1940. évben*, 9.

Budapest, on average 1 029 beds were at the disposal of 100 thousand patients, in the countryside only 298.[236] (For details see Appendix Table 11.)

The provincial population had another option besides appealing to hospitals in the countryside. Professor Károly Wolff, director physician in chief of the hospitals in Budapest, compiled a statistics about the number of patients from the countryside being treated in Budapest. According to his results, in 1940, 15 812 patients out of the 99 954 were from settlements near the capital, another 19 565 from the countryside and 448 from abroad.[237] It shows that in a considerable amount of cases, patients from the countryside travelled to hospitals in Budapest.

Morel argues for the increasing role of physicians who were involved in cultural and administrative activities in order to encourage and implement the role of hygiene as part of the social process. This coincides with the opinion of Adolf Weber who emphasized the inner transformation of men, besides the improving external circumstances. As members of health authorities, learned societies, elected assemblies and families, physicians were able to transform people's lives little by little and raise the interest and demand of the population for medical help.[238] Taking into consideration the theory of Susan Cotts Watkins about collective demographic behavior in a particular territory, medical care becoming a standard custom was one of the best that could be achieved in order to reduce infant mortality. Similar tendencies can be traced among the Hungarian physicians also. Béla Johan describes that physicians should be able to communicate effectively with patients in order to raise their interest and transform their minds thus improve infant mortality. He argues for changes to begin at the

[235] Ibid, 13.
[236] Ibid, 21. It has to be added, that these data contain the statistics of the re-attached territories that had worse results than Hungary.
[237] Ibid, 17.
[238] Marie-France Morel, "The Care of Children: the influence of Medical Innovation and Medical Institutions on Infant Mortality 1750-1914", 207.

lowest level thus prepare the ground for national reforms.[239] In addition, from the accounts published in the *Orvosi Hetilap*[240], aspects of interwar physicians' self-identity can be observed. The example of István Weis shows that physicians thought it important to be not only medical doctors but also sociologists who are able to map the social connotations of diseases and serve public health.[241]

Through the example of France, Morel shows the reluctance of the village population towards "urban medicine". The mass vaccination campaigns offered the first opportunity for the countryside to meet medical help in the 19th century which later developed into diagnosing and identifying infant illnesses.[242] From the accounts of the health visitors however, it is visible that the problems of superstitions and folk beliefs related to health were still heavily present in interwar Hungary.

3.2 The role of the health visitor system

Infant and mother care has become the centre of attention already in the beginning of the 20th century in Hungary due to the much worse infant mortality results comparing to other countries in Europe. Hungary was one of the first countries in Europe that introduced a law in order to protect and control the health status of infants. From the 1920s the state had a greater role in improving health care and infant care. In order to professionalize infant care the state provided qualification possibilities for midwives and founded organizations that had medical and social role. One of these associations operated in towns while the other in villages.

[239] Béla Johan, "Megjegyzés a közegészségügyi reformtervezet bírálatára" (Comments on the Critique of the Public Hygiene Law) *Orvosi Hetilap* 57, no.7 (1927): 188.
[240] *Orvosi Hetilap* was a medical, weekly journal of Hungarian physicians published from. Besides medical issues, it also dealt with some social aspects of the physician community.
[241] István Weis, "Megjegyzések Zemplényi dr. hozászólásához." (Comments on Professor Zemplényi's Account) *Orvosi Hetilap* 57, no.6 (1927): 163.
[242] Marie-France Morel, "The Care of Children: the influence of Medical Innovation and Medical Institutions on Infant Mortality 1750-1914", 208.

From 1915 the *Stefánia Szövetség* represented the beginning of the nursing system in Hungarian towns. It helped infant and mother care from different approaches. Due to their propaganda activity in the counties under their control, infant mortality rates began to decrease significantly. Parallel to them another association started to work, the movement of health visitors in villages, called *Zöldkeresztes* movement. Their existence meant the real break-through in infant care in villages. Among their activities theoretical and practical accomplishments can be found also.

The system of health visitors has been peculiar to Hungary. Since the first decades of the 20th century they helped to reduce infant mortality significantly. On the basis of their available publications it is possible to explore the beginnings of their work, the creation of these associations, the type of activities and their effectiveness. The main question of the chapter is how these associations were organized and what their job consisted of. The journals of *Jelentés a Stefánia Szövetség éves működéséről* and *Zöld Kereszt – Tudósító Egészségügyi Védőnők részére* will help to analyze this topic.

The Hungarian state treated the bad situation of infants fairly well since it was one of the first countries in Europe where mother and infant care networks were developed. From statistical yearbooks and contemporary demographers' works it can be seen that the state regarded the *Stefánia* Association as its main ally, therefore urged cities, associations, villages to cooperate with them.[243]

One of the most important factors in decreasing infant mortality was the change of mentality towards infants. It was the result of a long fight that people's attitude changed from indifference about an infant's death to solicitude and cooperation with health visitors. Even in the 20th century superstitions made the modernization in medical care harder to accomplish, since people did not trust in hospitals and in medication. The state had to realize that it is not enough to establish institutions, but the trust of people's should be won. Especially in rural

areas, where according to the general belief, hospitals were regarded as hotbeds of infections, gates to death.[244] Contemporary accounts of physicians prove that hospitals in interwar Hungary were not properly prepared to deal with ill infants, although from 1921 attempts were made to separate infectious infants by having enough distance between beds or not allowing ill parents to enter. These novelties along with having enough soaps, clean towels and spacious wards facilitated the realization of clean hospital services.[245] Besides infrastructure, health visitors were needed to convince people that regular baths serve not only to banish bad mood and that amulets do not help to cure diseases.[246] These beliefs were widespread in Hungary even at the beginning of the 20th century. According to the publication of the *Stefánia* Association, superstitions were common among midwives also. In the first decades of the 20th century, 13 906 midwives were active, among whom only about 3 000 were qualified, while the others were considered to be charlatans.[247] The remnants of folk therapies prove that in rural areas individual behavioral patterns were still determining, so people did not belong to the large community of the state but to the local communities. The influencing power of local communities is more obvious in the area of fertility but through the problem of breastfeeding its effect can be traced in infant care as well.[248]

In the 20th century the value of human life, and especially childhood started to become much more important. New thoughts emerged among intellectuals, considering children as the power of the state.[249] This resulted in demands for medical care, especially in the middle

[243] József Melly, "Budapest csecsemőhalandósága nemzetközi megvilágításban", 634.
[244] Robert W.Lee, "Medicalisation and Mortality Trends in South Germany in the early 19th century", in A. Imhof (eds.), *Mensch und Gesundheit in der Geschichte* (Husum: Matthiesen, 1980), 79.
[245] Zoltán Bókay, "A fertőzéstől való megvédéstől és a csecsemők hospitalizmusáról" (Protection against Infections and Hospitalization of Infatns) *Orvosi Hetilap* 51, no.47 (1921): 415.
[246] Marie-France Morel, "The Care of Children: the influence of Medical Innovation and Medical Institutions on Infant Mortality 1750-1914", 211.
[247] "Jelentés a Stefánia Szövetség működéséről 1915. június 13 – 1917. június 15,"(Report of the Pursuit of the Stefania Szovetseg between 1915. június 13 – 1917. június 15), *Országos Stefánia Szövetség az Anyák és Csecsemők Védelmére kiadványai* (Stefania Nationwide Association for the Protection of Mothers and Infants), No.13, (Budapest: Pfeifer Ferdinánd ,Zeidler testvérek bizománya, 1917), 22.
[248] Susan Cotts Watkins, *From Provinces into Nations: The Demographic Integration of Europe 1870-1960*, 20.
[249] Marie-France Morel, "The Care of Children: the influence of Medical Innovation and Medical Institutions on Infant Mortality 1750-1914", 197.

class. This underpins what Reinhard Spree stated in his article, that the decrease of infant mortality did not happen at the same time in all social layers, since wealthier families could afford medical care earlier.[250] The First World War gave further impetus for mentality changes, as the role of mothers started to become investigated.[251] The state, first in Germany, accused mothers of being responsible for infant deaths and commanded that the state must provide preparatory education for girls about how to be good mothers. Steps were taken to ensure new methods in infant care. As opposed to tradition, strict and coherent medical rules were introduced, concerning milk diet, daily bath, indoctrination of cleanliness, boiled milk or regularly disinfected glass and rubber bottles.[252] These precepts played important role in the interwar years also. Mothers were told to be responsible for their baby's death which is therefore not determined by fate but can be prevented. Morel argues for the decisive importance of breaking religious beliefs and introducing the notion of guilt associated with parenthood.[253] Precisely, these ideas had a consequence of changing attitude which enhanced the survival chance of infants. The long tradition of fatalism as a reason for infant death proved to be hard to break, while mothers were not easy to be convinced of medical advances also. This was however the state's interest because these infants were the future generation of soldiers.[254] In Hungary, the *Stefánia* Association promoted similar ideas and emphasized that healthy children are important for the state's strength.[255]

The *Stefánia* Association was formed on 13 June 1915. It received its name from Princess Stefánia who was the patron of the association. The existence of the association was

[250] Reinhard Spree, "Die Entwicklung der differentiellen Säuglingsterblichkeit in Deutschland seit der Mitte des 19. Jahrhunderts," in A. Imhof (eds.): *Mensch und Gesundheit in der Geschichte* (Husum: Matthiesen, 1980), 266.
[251] Marie-France Morel, "The Care of Children: the influence of Medical Innovation and Medical Institutions on Infant Mortality 1750-1914", 210.
[252] Ibid, 211.
[253] Ibid, 212.
[254] Paul Weindling, "The medical profession, social hygiene and the birth rate in Germany, 1914-1918," in Richard Wall – Jay Winter (eds.), *The Upheaval of War* (Cambridge, 1988), 424-425.
[255] "Jelentés a Stefánia Szövetség működéséről 1915. június 13 – 1917. június 15", 16.

especially important during the war years when state intervention was not possible.[256] József Madzsar claims that the principles of infant and mother care can be summarised in four main points. Firstly, it should not be allowed that mothers be exposed to worsening economic conditions if they give birth to children. The second point is that mothers must not die while giving birth due to lack of hygienic conditions or inappropriate equipment. He also draws attention to the importance of breastfeeding, and as a fourth point he mentions that infants should not die because of the ignorance of mothers.[257] This thought brings him closer to the above mentioned German example. The *Stefánia* Association regarded these principles as its main goal that should be achieved in all towns in Hungary.

The *Stefánia* Association is a social organization that proceeds by organizing lectures, celebration, from its filiations and from donations.[258] They still need support from the state however, in particular fields of infant care. József Madzsar accentuates the need of mother's insurance, breastfeeding allowance, legal regulation of pregnant women's labour relations, judicial protection of mothers and infants, help in intensifying the social qualification of physicians and the need of improving the levels of midwife education.[259] Besides, the problems of wet nurses, nurseries and guardianship should also be solved. It shows how broad the *Stefánia* Association's fields of interest were.[260]

The *Stefánia* Association was established in Budapest and spread from Budapest towards other towns with the help of filiations. Nevertheless, the stress was on the Budapest activity. This was due to the principle of the association, as it wanted to improve first the most densely populated areas where they could be more effective and could make use of the more

[256] The law 39088/1917 gave charge the association of organizing infant care. Keller Lajos (ed.), Jelentés a Stefánia Szövetség 1936. évi működéséről (Report of the Pursuit of the Stefania Szovetseg in 1936). *Országos Stefánia Szövetség. Az Anyák és csecsemők védelmével államilag megbízott szervezet kiadványai* (Stefania Nationwide Association for the Protection of Mothers and Infants), no. 115, (Kalocsa: Árpád Rt. Könyvnyomdája, Szent-István u. 31., 1937.), 3.
[257] "Jelentés a Stefánia Szövetség 1936. évi működéséről", 3.
[258] "Jelentés a Stefánia Szövetség 1936. évi működéséről", 24.
[259] "Jelentés a Stefánia Szövetség működéséről 1915. június 13 – 1917. június 15", 16.
[260] Ibid. 19.

developed economic conditions. They called this policy centrifugal expansion. This remained their major principle in spite of the fact that they were aware of the worse situation in rural areas.[261] It can be seen from the following table that their preventive work involved more inhabitants in the Southern part of Hungary where infant mortality rates were higher than in Transdanubia. It shows their consciousness to focus on parts of Hungary with high infant mortality rates where the population was in the greatest need. To point out their efficiency, the infant mortality rate of counties before and after 1936 should be compared with respect to the proportion of the population involved. They put the greatest emphasis on South Hungary, to county Békés, Hajdú and Jász-Nagykun-Szolnok. This also corresponds to regions with the best medical coverage of this territory. These counties had one of the worst infant mortality rates in the interwar years, but by 1941 a significant improvement can be observed. Their preventive work affected to a lesser degree the counties in North Hungary, like Abaúj-Torna and Nógrád-Hont where infant mortality rates were among the highest still n 1938. In case of the Transdanubian counties the effect of their work is also not so evident, in spite of improvements observable in the 1930s. But they are still among the counties with the worst results at that time.[262] Nevertheless, it has to be added that infant mortality is always a result of several causes related to complex social, cultural issues that are hard to define quantitatively. So no cause can be claimed to be exclusive, not even for a short period of time or a small territory. Examples of some counties prove however that the work of the *Stefánia* Association contributed to the improvement of infant mortality rates. The table below shows the proportion of inhabitants involved in the preventive work of the Association in Hungarian counties. As in the case of Jász-Nagykun-Szolnok, the 99.6% coverage means that in each village of the county at least one health visitor was working who dealt with all the mothers and infants of the settlement. In the Transdanubian counties and in Northern Hungary great

[261] "Jelentés a Stefánia Szövetség 1936. évi működéséről", 7.
[262] "Jelentés a Stefánia Szövetség 1936. évi működéséről", 7. *Magyar Statisztikai Évkönyv*, 1938, 22.

differences existed among counties with the involved population varying from 5% to 99%. Nevertheless, their publications prove that the *Stefánia* Association was proud of its expansion and aimed at involving more and more settlements in its work.

Table 4 – Proportion of Inhabitants Involved in the Infant Care Activities of the *Stefánia* Association in 1936

Counties	Proportion of inhabitants involved [%]
South-Hungary	***76***
Békés	82.3
Hajdú	97.8
Jász-Nagykun-Szolnok	99.6
…	…
Transdanubia	***36.9***
Somogy	10
Veszprém	19.4
Fejér	40.4
Baranya	99.5
…	…
North-Hungary	***33***
Abauj-Torna	7.8
Nógrád-Hont	31.1
Szatmár	5.1
…	…
Hungary total	**58.3**

Source: Lajos Keller (ed.), Jelentés a Stefánia Szövetség 1936. évi működéséről (Report of the Pursuit of the Stefania Szovetseg in 1936). *Országos Stefánia Szövetség. Az Anyák és csecsemők védelmével államilag megbízott szervezet kiadványai* (Stefania Nationwide Association for the Protection of Mothers and Infants), no. 115, (Kalocsa: Árpád Rt. Könyvnyomdája, Szent-István u. 31., 1937.), 14-16.

The infant care activities were done partly by physicians, and partly by health visitors who represented a new institution in the modernization of medical care. The first mother and infant care course was organized by the *Stefánia* Association. This one-year program was open to every woman who finished four grades in primary school, and had a clean record. In the interwar years the course expanded with a 12-month practical qualification and ended with

a certificate (see Appendix Table 12-13). The preventive health care network consisted of establishing new infant care institutions, pantries, nurseries, day-care centres and maternity homes (see Appendix Table 12-13).[263]

Besides medical care, the most important task of health visitors was propaganda activity. It had three main directions. Firstly they wanted to draw attention to the importance of mother and infant care. Their second aim was the dissemination of knowledge about infant and mother care and finally, the improvement of ethical, religious and patriotic thinking that were loosened as a consequence of the war. These promotion activities served the purpose of decreasing ignorance and superstitions.[264] The tools of the health visitors were publication (see Appendix Figure 1), lectures and practical illustration.

Among the publication of the association, 112 types of books can be found with their topics varying on a broad scale, such as nutrition of infants, the necessity of immunization or legal background of infant and children care.[265] In the 1930s, 25 thousand copies of these books were distributed annually.[266] Besides books, the *Stefánia* Association published other short booklets, flyers with titles: Grooming of infants, Why do infants cry?, What should a good mother know?, The swaddling-clothes of infants, Fashionable superstitions in infant care, Hereditary diseases, Protection against tuberculosis.[267] The *Stefánia* Association paid attention to foreigners in Hungary and to foreign examples also. The 40 different types of short booklets were translated into German, so that they could involve German people in Hungary into their preventive work. In 1936 1.3 million copies were distributed from Hungarian booklets and 40 thousand from the German ones. In 1928, the *Stefánia* Association established a monthly journal with the title, Infant and Mother Care that kept up relationship

[263] László Kiss, "Egészség és politika – egészségügyi prevenció Magyarországon a 20. század első felében," (Health and Politics – Prevention in the First Half of the 20th century in Hungary) *Korall* 17 (2004):110.
[264] "Jelentés a Stefánia Szövetség 1936. évi működéséről", 238.
[265] Ibid, 239.
[266] Ibid, 22.

with French, English, Italian, American, German, Greek and Indian professional journals. Due to this mutual exchange of journals, foreign infant care knowledge could penetrate into Hungarian professional circles.[268]

Morel pointed out that since the Enlightenment era, in France and in other European countries, attitudes towards children changed a lot. The special nature of childhood was emphasized, while child health and vulnerability were recognized also. In the campaign for preserving child health, passionate physicians were involved, as well as a whole new literature of scientific treatises were spread.[269] The effects of this literature is debated whether the discussions on breastfeeding, mistakes made by midwives, swaddling of babies, daily bathing or wet-nursing reached the mothers and resulted in attitude changes. Morel argues that before the 20th century, due to large-scale illiteracy, these articles could not have been radically efficient.[270] The example proves, however that attempts were made already before the First World War to spread newsletters in order to enhance the available information of mothers.

The other tool in the hands of health visitors of *Stefánia* Association was the organization of lectures. In 1936 they held 4769 lectures. Parts of them served the further qualification of midwives, while another branch of lectures belonged to the Mothers' School Program aiming to educate mothers for infant care knowledge.[271] They held the most lectures in Transdanubian counties: Zala – 510, Tolna – 255, Somogy – 294, Baranya – 277, Vas – 331. In North-Hungary also many lectures were organized: Borsod-Gömör-Kishont – 207, Szabolcs-Ung – 171, Nógrád-Hont – 221 and in Pest-Pilis-Solt-Kiskun – 376. As opposed to these figures, some other parts of Hungary were neglected. In East-Hungary, in Hajdu county

[267] Ibid, 242. These booklets were also available in a separate volume with the title, Magyar Anyák Naptára. [Antal Bodor et al, *A Magyar Anyák Naptára az 1923. évre* (Calendar for Hungarian Mothers for 1923), (Budapest: Az Amerikai Vöröskereszt Magyarországi Anya-és Csecsemővédő Akciója, Vas u. 10, 1923).]
[268] Ibid. 22-23.
[269] Marie-France Morel, "The Care of Children: the influence of Medical Innovation and Medical Institutions on Infant Mortality 1750-1914", 199.
[270] Ibid, 201.

only 9 lectures were held, while in Komarom-Esztergom only 19.[272] It shows the preferences of the association while their choice also corresponds to the results of the regional distribution of infant mortality. (see chapter 2.2 Territorial distribution of infant mortality) Film excerpts and personal conversations after the lectures contributed to the success of these lecture series. These methods were later implemented by the *Zöldkeresztes* Movement also. The *Stefánia* Association had some other institutions as well, such as a mother and infant care museum, a professional library, a storehouse of plans and objects and they arranged a travelling exhibition in many cities every year.[273] Another important tool was the use of posters with inscriptions like: The health visitor, Hungarian Mothers, you can make Hungary powerful!. In schools they hanged the following posters: Good care means half health, The nation lives in its children, Cradle is the family's altar, The importance of fresh air, Sunshine helps preventing rachitis. These posters were important as the everyday presence of them helped to implement these ideas into students' lives.[274] As Eugen Weber argued for the role of maps in schools that helps promote the idea of a French nation-state, these medical posters promote health care issues.[275]

In the first decades of the 20th century, the majority of the Hungarian population still lived in rural areas where the infant mortality rate exceeded those results of the cities.[276] The contemporary journals accused the presence of ignorance, bad-will and imprudence in the field of infant care of being responsible for the high rates of infant mortality. Therefore, physicians complained that although villages are in greater need to have infant care network, urban areas are preferred in the case of establishing new institutions.[277] The problems of infant care however, were the same for both urban and rural areas, and were even more

[271] Ibid, 23.
[272] Ibid, 237.
[273] Ibid, 24.
[274] Ibid, 243-44.
[275] Eugen Weber, *Peasants into Frenchmen. The Modernization of Rural France,1870-1914*, (Stanford, 1976.)
[276] Lajos Keller, "A falusi anya-és csecsemővédelem", 332.

serious in villages. Consequently, emphasis was drawn on the education of mothers, distribution of infant care knowledge and the regular attendance of health visitors who helped to comply with the advice of physicians. The association took into consideration that mothers in rural areas had less chance to enrich their knowledge. Therefore, even greater emphasis was put on the education of health visitors and midwives who were the only helpers of mothers.[278] Health visitors of the *Zöldkeresztes* Movement were trained for 3 years. Moreover, a leaving examination from a grammar school was needed and women with teacher and kindergartner degrees were preferred.[279] According to János Sándor, Minister of the Interior, powerful propaganda activity should be carried out, involving primary school teachers and vicars, since they are the central figures of villages. He argued also for the infant care education of civil servants and policemen since they work with people thus able to hand on knowledge.[280]

In 1930 already 30% of rural areas were covered by mother and infant care institutions affecting 1.3 million people due to the activity of the *Zöldkeresztes* Movement.[281] Tihamér Csáky, medical officer of health in the Mezőkeresztes district, summarised what the *Zöldkeresztes* Movement meant in practice.[282] He argued that the health status of Hungarian

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[277] Sándor Kovacsics, "Csecsemővédelem falun," (Infant Care in Villages), *A Falu. A Faluszövetség hivatalos lapja és havi folyóirata* 7, no.4 (1926): 337.
[278] Lajos Keller, "A falusi anya-és csecsemővédelem", 334.
[279] Margit Mezey, "A *Zöldkeresztes* Védőnő" (*Zöldkeresztes* Health Visitor), in Ferenc Faragó (ed.), *Zöldkeresztes Kalendárium* (Budapest: Országos Egészségvédelmi Szövetség, 1942.), 98.
[280] *Az anya-és csecsemővédelem a képviselőházban* (gróf Apponyi Albert beszéde és Sándor János belügyminiszter válasza), 24.
[281] Lajos Keller, "A falusi anya-és csecsemővédelem", 335.
[282] „Mindazok, akik komolyan lelkükön viselték a cselekvő fajvédelem problémáját, tudták, hogy ezt a kérdést a politikán kívül más működési területre, így az egészségvédelem területére is át kell ültetni. Így hódított magának mind nagyobb tért az az igen helyes felfogás, hogy a tulajdonképpeni magyar fajvédelem mindenek előtt a magyar faj, a magyar nép egészségügyének felkarolásában áll. Ezen gondolattól lelkesítve önzetlen vezető férfiak munkája tette lehetővé a „Zöldkereszt" intézményeinek megvalósítását. Annyi többé-kevésbé hiábavaló próbálkozás után, a „Zöldkeresztben" találhattuk meg azt az egyetlen szervezetet, mely a nép, a vidék, a magyar falu egészségügyi szolgálatát tökéletesen el tudja látni. Hogy a Zöld Kereszt működése mit jelent a falun, azt nem lehet egyszerűen rideg statisztikai számok szemüvegén keresztül megítélni, ezt elsősorban mi tudjuk megítélni, vidéki orvosok, kik nemcsak a betegek gyógykezelésénél tapasztalhattuk állandóan segítő kezét, hanem elsősorban foglalkozásunk azon szebbik részénél, mikor a járványok leküzdésével, az egészségeseket óvjuk a betegségektől, mikor a csecsemőhalandóságot – melynek tekintetében oly sokáig szomorú vezető helyen állottunk Európa statisztikájában – igyekszünk csökkenteni." [Tihamér Csáky, "Beszámoló a mezőkeresztesi egészségügyi szolgálat keretén belül végrehajtott csecsemőtáplálkozási akcióról," (Account of an Infant

people must be accomplished in practice. The institutions of the *Zöldkereszt* were the result of altruistic, self-sacrificing work of Hungarian people. It fulfilled the needs of the villages after many unsuccessful attempts. Its effects cannot be expressed merely with statistical data but doctors in villages can experience the helping hands of health visitors.[283] He also reported about the organization of the *Zöldkereszt*, claiming that by 1939 the institutions were built according to commands from the government and the physicians had the role of helping the association and health visitors with ideas and plans. He demonstrated its significance with a concrete example. He introduced many novelties in connection with the nutrition of infants. He observed that in a particular age the development of infants stopped due to the lack of vegetables and vitamins. He managed to achieve that 12 families in Mezőkeresztes received 1 kg vegetables every week which mothers learned to prepare with the help of health visitors.[284]

Besides practical help with infants, the most significant part of the *Zöldkeresztes* Movement's activity was its propaganda through publication in a 70-80 thousand numbers (see Appendix Figure 2 and Figure 3) and lecture series. In terms of health care modernization we always face the question of mentality changes of people. From the accounts of Margit Mezey it can be seen that, in the Mezőkeresztes district, it was extremely difficult to accomplish the lecture series as even the parents and teachers were repugnant about the infant care education. When the lectures could finally take place, the students were indifferent, undisciplined and were not willing to try out infant swaddling and bathing techniques.[285] She published also her outlines for the lectures, from which we can draw conclusions about the most important infant care areas covered in villages by *Zöldkereszt*. First of these was the

Nutrition Project held in the Frames of the Health Care Movement in Mezokeresztes), *A Zöld Kereszt – Tudósító egészségügyi védőnők részére* (The Green Cross – Chronicle of Health Visitors) 10, no.3 (1939): 61.]

[283] Tihamér Csáky, "Beszámoló a mezőkeresztesi egészségügyi szolgálat keretén belül végrehajtott csecsemőtáplálkozási akcióról," (Account of an Infant Nutrition Project held in the Frames of the Health Care Movement in Mezokeresztes), 61.

[284] Ibid, 62.

[285] Margit Mezey, "Hozzászólás Killer Tiborné Simonits Marcella testvér közleményéhez," (Contribution to the Proceedings of Killer Tiborné Simonits Marcella), *A Zöld Kereszt – Tudósító egészségügyi védőnők részére* 2, no.7 (1931): 23.

topic of infectious diseases, like tuberculosis and typhus. In connection with these, health visitors talked about the germs, about how do germs get into our body, and how sterilization can help to defend ourselves against them. General hygienic issues were also among the lecture topics, such as the cleaning of clothes, houses and food. In some cases, the health visitors introduced first aid information or strategies for nursing at home. Margit Mezey held these lectures in Szentistván, where she was also confronted with the still flourishing folk beliefs. She had to emphasize the importance of the doctor's visits and the damaging nature of superstitions.[286]

An account from 1931 shows what the most important fields of work of *Zöldkeresztes* health visitors were. Their job consisted of family visits (22.6%), work in the health centre (15.2%) and work in schools (14.1%). They spent time with travelling (18.1%) and administration (13.1%).[287] In case of need they carried out other aid programmes also. Margit Mezey and Margit Kovács give an example when health visitor students sewed infant clothes as Christmas presents. Hundreds of clothes were distributed among families in Gödöllő, Berettyóújfalu, Vác, Szirák and Mezőkeresztes district.[288]

Besides the two previously mentioned, nationwide health visitor associations, a similar organization was in force in the Great Plain, founded by physicians. In a newsletter from 15 January 1912, members of the *Alföldi Csecsemővédő Egyesület* (Infant Care Association of the Great Plain) drew attention to the large scale mortality of children under 7 in the counties right from the Tisza, and argued that not only more infants died but also fewer were born. Therefore their aim was to create a centre for infant care in the Great Plain.[289] Besides

[286] Margit Mezey, "Hozzászólás Killer Tiborné Simonits Marcella testvér közleményéhez," (Contribution to the Proceedings of Killer Tiborné Simonits Marcella), 24.
[287] Mária Steller, "Az egészségügyi mintajárások negyedévi munkája," (Results of Quarterly Work in Health Care Districts) *A Zöld Kereszt – Tudósító egészségügyi védőnők részére* (The Green Cross – Chronicle of Health Visitors) 2, no.7 (1931): 15.
[288] Margit Kováts and Mezey Margit, "Karácsonyi adományok," (Christmas Offerings) *A Zöld Kereszt*: 2, no.12 (1931).
[289] Semmelweis Orvostörténeti Levéltár (Semmelweis Medical Archive) / Filep Aladár letét 25/ 210, Alföldi Csecsemővédő Egyesület, 15 January 1912 Newsletter.

newsletters, their foundation document was preserved. It advocated equal infant, child and mother care in all social layers, along with the enforcement of the national health care laws. Their secondary aim was to collect money for the establishment of a central infant asylum in the Great Plain.[290]

The association held annual assemblies in Hódmezővásárhely where concrete plans were accepted to improve *infant* mortality. The centre of their attention was the Great Plain, however the register of the 20 November 1910 assembly proves that members of the *Alföldi Csecsemővédő Egyesület* wanted to expand their sphere of operation to all counties and municipalities of Hungary.[291] Their exact program is outlined in their operational rules involving financial and moral support from municipalities, physicians, priests, schools, as well as state and church public records. The main tools in their hands to raise money were membership fees, donations, lectures, celebrations and charity lotteries.[292] The *Alföldi Csecsemővédő Egyesület* was another example of the enthusiastic effort of overcoming the attitude of ignorance, bad will, immorality and superstitious beliefs of the population.

From the above mentioned examples it can be seen how crucial the job of health visitors in Hungary was. Especially the propaganda activity of the *Stefánia* Association and *Zöldkeresztes* Movement was important, as in the interwar years the greatest obstacle of decreasing infant mortality rates was the ignorance of mothers. So, the modernization of medical care in Hungary meant not only the establishment of new institutions but also the change of mentality and hygienic conditions of the people. The *Stefánia* Association and Zöldkeresztes Movement helped to reduce infant mortality rates significantly, so in interwar

[290] Semmelweis Orvostörténeti Levéltár (Semmelweis Medical Archive) / Filep Aladár letét 25/ 210, Alföldi Csecsemővédő Egyesület, Foundation document.
[291] Semmelweis Orvostörténeti Levéltár (Semmelweis Medical Archive) / Filep Aladár letét 25/ 210, Alföldi Csecsemővédő Egyesület, 20 November 1910 Newsletter.
[292] Semmelweis Orvostörténeti Levéltár (Semmelweis Medical Archive) / Filep Aladár letét 25/ 210, Alföldi Csecsemővédő Egyesület, Operational rules.

Hungary developing tendencies could be evolved that followed the Western-European demographic models.

Morel warns, however that giving too much importance to the development of health care and public hygiene can be decisive. They are closely related to infant mortality decline although not exclusive explanations. As it was mentioned earlier, infant mortality decline had serious social and biological determinants as well, that has to be investigated.[293] Development in health infrastructure, increasing access to medical care and more efficient public campaign, however surely contributed equally to the decline of infant mortality although behavioral change in child rearing is hard to measure.

[293] Marie-France Morel, "The Care of Children", 212.

4. SOCIO-ECONOMIC DETERMINANTS OF INFANT MORTALITY RATE

The topic of demographic transitions in the territory of the Habsburg Monarchy is not well-researched. An almost inexistence of contemporary references to demographic inequalities can be observed despite the richness of published and unpublished historical sources of the same inequalities. The Habsburg Monarchy had a systematic, reliable and comprehensive statistic tradition that was inherited by the nation states formed after the dissolution of the Monarchy. In the volumes of the *Magyar Statisztikai Szemle* not only data but studies were published until 1947. Since then however publication has stopped, furthermore, international researches have also neglected demographic topics.

Since the introduction of population censuses demographic data help identifying levels of modernization. Therefore, the third level of investigation, after the analysis of the determining factor of residency and available infant health care infrastructure, is the socio-economic position of families. As it was mentioned earlier, families in Hungary did not have equal living circumstances and thus equal chances for infant survival. Hungarian families were unequal in terms of professions of the father, religion and family status also. In this chapter the influencing effect of these variables will be investigated. Most data were obtained from the *Magyar Statisztikai Évkönyv* (Hungarian Statistical Yearbook)[294] and the *Budapest Székesfőváros Statisztikai Évkönyve* (Statistical Yearbook of Budapest)[295] and other relevant sources. These data and their contribution to demographic development have not been well-researched before, therefore new conclusions can be drawn about Hungarian demographic development in terms of infant mortality rate and about the social inequalities of the

[294] *Magyar Statisztikai Évkönyv*, Új Folyam, volumes XIII-XXX, (Budapest, Az Atheneum Irodalmi es Nyomdai Részvénytársulat könyvnyomdája, 1925-1943.)
[295] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XIII-XXXI, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1925-1942.)

demographic transition as well as the stage of modernization of the country. In case of religion and illegitimacy, a comparison between Budapest and the countryside is possible however data for the father's profession is not available for the whole of the country.

4.1 Infant Mortality Rate according to the Father's Profession

The first variable to be examined is the determining factor of the father's profession in infant mortality rate. The volumes of the Statistical Yearbook of Budapest contain data about the infant mortality rates according to professions. Moreover, these data are available separately for the working and middle classes. Therefore, an additional aspect of social layer and its contribution to demographic development is possible to be elaborated. Data according to professions in Budapest are available between 1927 and 1931. Despite the short period, the main tendencies and differences can be illustrated and explained.

As a first step, data were gathered form the special volumes edited by Lajos Illyefalvi. The volumes titled *A munkások szociális és gazdasági viszonyai Budapesten* (The Social and Economic Conditions of the Working Class in Budapest)[296] and *A főváros polgári népességének szociális és gazdasági viszonyai* (Social and Economic Circumstances of the Bourgeois Population in Budapest)[297] are of exceptional importance as detailed information was collected about the population of Budapest from 1925 to 1930. Part of this is the data of infant mortality rate according to the father's profession.

The method applied during the data collection consisted of gathering the crude infant death figures from the statistical yearbooks between 1927 and 1931. Data were available in a detailed table according to the age of death from 1 day to 5 years therefore the death rate of

[296] Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten* (The social and economic conditions of the working class in Budapest), (Budapest: Budapest Székesfőváros Statisztikai Hivatala, 1930.)
[297] Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai* (Social and Economic Circumstances of the Middle Class Population in Budapest), (Budapest: Budapest Székesfőváros Statisztikai Hivatala 1935.)

the first 12 months should be assorted and added. As a second step, these numbers had to be compared to the number of live-born in the same year. As a result, the infant mortality rate could be calculated for the number of live-born.

According to the father's profession, two distinctive datasets can be compiled for the working class and for the middle class families. In case of the middle class families five years and five statistical yearbooks were examined, out of which four belonged to the Statistical Yearbook of Budapest series. In addition, data for 1931 was included in the volume of *A főváros polgári népességének szociális és gazdasági viszonyai* (Social and Economic Circumstances of the Middle Class Population in Budapest). These data could be put together because they use the same categories and both refer to the middle class population of Budapest. As for the working class families, infant mortality rate could be calculated only for 1928 and 1929 based on data in the volume of *A munkások szociális és gazdasági viszonyai Budapesten* (The Social and Economic Conditions of the Working Class in Budapest). Despite the short period of time, the additional aspects of social layer and indication of illegitimacy rate are great advantages of these datasets.

Data for the middle class professions were available in a very detailed table therefore by merging relevant occupations together a more concentrated table was made with 14 categories (see Appendix Table 14). Professions are distinguished according to the legitimacy status of the family and according to the status of the employed. Three levels of status was separated in each main branch of profession that of self-employed, officers and journeymen or assistants. The main difference is clearly seen from the table regarding the legitimacy status. Illegitimate infants had an approximately four times higher mortality rate – an average 27.2% between 1927 and 1931 – than legitimate ones (7.5%).[298] The tendency in these five years

[298] Results were calculated in all cases for the average of the five years given in the table. Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai* (Social and Economic Circumstances of the bourgeois population in Budapest), (Budapest: Budapest Székesfőváros Statisztikai Hivatala 1935.) Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative

shows a relatively balanced development in the annual sum though with huge occupational variations. Day-laborers (29.3%) and domestic servants (18.7%) had the highest infant mortality rate and were represented mainly among illegitimate deaths. Among the self-employed also a huge difference can be observed according to occupation. Those working in agriculture and industry (39.9%) had the highest infant mortality rate followed by self-employed in trade (35.9%) and public service (20.9%).[299] Differences were more significant among illegitimate babies but can be traced among the legitimate also. Besides, assistants and journeymen both in agriculture, mining, industry, transport and public service had higher rate of died infants, an average of 28.9%, compared to officers and self-employed. Table 15 shows also other important trends in social history. Firstly, the small number of legitimate infants born and died among domestic servants can be seen. Secondly, the total absence of illegitimate babies is observable in case of landowners.[300] Among the data an unexpected fluctuation can be seen in case of some professions and great yearly variations among the illegitimate infants. In some cases the lack of data makes a thorough analysis and comparison impossible. Nevertheless, the high rate of illegitimate infants among the self-employed is surprising especially compared to the lower rate of the domestic servants who were one of the most endangrered occupational group in terms of infant survival. Among the legitimate babies self-employed had better results than assistants, with landlords having one of the best infant mortality rates with 4.5%, and reaching only 1.7% in 1930.[301] These figures prove the significance of wealth, better living circumstances and available health infrastructure in infant mortality.

Yearbook of Budapest), Vol. XV-XVIII., 1927-1930 (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1928-1931), passim.

[299] Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai*, 79-81, 146. Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1928-1931, passim.

[300] Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai*, 79-81, 146. Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1928-1931, passim.

[301] Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai*, 79-81, 146. Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1928-1931, passim.

Besides the middle class professions, a detailed statistics was compiled for working class families also (Appendix Table 15). Again both the crude birth and death figures were collected making the calculation of infant mortality rate possible. In case of this table the first comment to be made should be, there again, the great difference between legitimate and illegitimate infant survival chances. In 1928 and 1929 illegitimate infant mortality rate was 22% though working class married couples experienced higher infant mortality rate (11.7%) than middle class fathers (7.5%).[302] Among working class occupations no self-employed and officers can be found, only assistants and journeymen. The 22 categories included in Table 16 were given, so no merging was needed. Both in case of legitimate and illegitimate professions infant mortality rate seemed to be rather balanced among the categories though great yearly digressions can be observed due to the availability of data only for a short period of time. In case of the gardener assistants infant mortality rate was 1.9% in 1928, while 26.9% in 1929. Another extreme case is that of the blacksmiths and locksmiths assistants' case, who experienced 28.5% infant mortality in 1928 and 83.3% in 1929.[303] These extreme figures are the result of having data only for two years, often with a small number of infants included in the research which makes impossible to observe longer trends and to eliminate such distortions. Moreover, another surprising result of the calculation is the infant mortality rate of domestic servants. Respectively to their social standing and financial position (to be detailed in the next subchapter) their infant mortality rate is the highest among all working class occupations (32.1%), especially together with manor servants (16.2%), however, unexpectedly, the majority of their deceased infants are among the legitimate cases (45.6%) with having only 18.6% among the illegitimates.[304] Again the insufficient nature of having statistics only for 2 years has to be emphasized in regard of these findings. Besides domestic servants, assistants in mining and metallurgy, millers, gardener, industrial, blacksmith and

[302] Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten*, 91, 128-129.
[303] Ibid, 91, 128-129.

locksmith assistants and day-laborers seem to be in the worst position in terms of experiencing infant deaths, while assistants of joiners, carpenters, wheel-smiths, barbers, butchers, bakers, typographers and lithographers had better infant survival chances.[305] So, workers in handicraft had better infant mortality rates than workers having hard physical jobs in agriculture and industry. This might be explained with the different nature of their job. Craftsmen may have had the opportunity to leave the baby in the workshop, possibly with their wives, while agricultural workers had to bring the infants to the field. In case of tailors, barbers, bakers or joiners, working at home could be a possibility with the result of providing better living conditions for the baby.

Comparison between middle class and working class professions with an additional dimension of legitimacy status proved that the father's profession determined infant survival chance of a family to a great extent. Those infants having a father living in marriage and working as self-employed or officer, possibly in public service and trade, had the highest chance to survive their childhood. Married craftsmen fathers, like joiners, carpenters, wheel-smiths, barbers, typographers and lithographers were also likely to bring more children up to adult age. As opposed to them, however, babies of day-laborers and domestic servants had the least chance to live long, in spite of being born to married couples. In addition, infants of fathers having a job in agriculture, mining or industry were not provided with appropriate living circumstances facilitating their survival chances, so they died in a larger number.

4.2 Infant Mortality Rate in Different Confessional Groups

The Habsburg Empire and then Hungary in the interwar years were in a unique position where ethnicity and confession were important factors of social identity and were used as variables in censuses. Therefore demographic data can be analyzed according to these

[304] Ibid, 91, 128-129.

variables and interrelations can be explored. This kind of research should be made use of, as this type of data was not available in most countries of Western Europe.

In this chapter data will be analyzed about infant mortality rates in different confessional groups. Data were provided by the Central Statistical Office. Each year will be covered from 1920 to 1941. Hungarian statistical yearbooks for counties and separate statistical yearbooks for Budapest edited by Lajos Illyefalvi give the opportunity to compare the infant mortality rates according to religious denominations in Budapest and the counties. Furthermore, the very rich statistical database compiled in the interwar years offer the exceptional comparison of data according to three variables; infant mortality, class and religious distinction. In two separate volumes of the *Budapest Székesfőváros Statisztikai Évkönyve* (Statistical Yearbook of Budapest) social characteristics of the working and middle classes are available including their infant mortality rates according to religion. The method of data compilation was the same as in case of the infant mortality rate according to the father's profession.

Statistical yearbooks identify eight religious groups with mentioning incidentally also other cases like one or two deaths among those of the Muslim and Nazarane faith.[306] Both the Statistical Yearbooks of Budapest and the Hungarian Statistical Yearbooks focus however on the Roman and Greek Catholics, Calvinists, Lutherans, Greek Orthodox and Jewish communities, and on the two received religions, the Unitarian and Baptist communities (Appendix Table 16 and 17). In approximately 20-30% of the cases the religious denomination is not identified or the family was registered to be non-denominational.[307] Both in the case of Budapest and the countryside, a decreasing tendency can be observed throughout the interwar period. The total infant mortality rate for all religious groups was

[305] Ibid, 91, 128-129.
[306] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* 1925-42, passim. *Magyar Statisztikai Évkönyv*, 1925-43, passim.
[307] Ibid.

19.3% in 1920 which fell to 13.4% by 1940.[308] The decreasing tendency was almost continuous with the exception of the years of 1922, 1924, 1927, 1929, 1932 and 1934. The cases in the 1920s and in 1934 can be evaluated as minor digressions, the 1932 result however proves to be a more severe back-set. The national average of infant mortality rate of 18.4% in 1932 was preceded by a result of 16.2% and followed by a rate of 13.4% infant mortality.[309] This is a great difference in the infant mortality rate within 3 years compared to the general tendency in the interwar period. The explanation for this huge difference must be a temporal, drastic event like an epidemic outbreak. This assumption is confirmed by a contemporary account in a special volume of the *Magyar Statisztikai Közlemények* that refers to a flu epidemic in 1932, with registering twice as many infants with enteritis diseases as in the previous years. Besides, illnesses of the digestive systems, respiratory diseases and stillbirth constituted 85% of infant deaths in 1932 that confirms the outbreak of a major epidemic.[310]

By the beginning of the Second World War a deteriorative tendency can be observed again as a result of which infant mortality rate fell back to 15%.[311] An interwar Hungarian physician, Ferenc Torday summarizes the bad effects of the First World War on the infant health in Budapest which could be in force similarly before the Second World War and could explain the worsening tendencies. He accentuates the disadvantages of the presence of the army that lead to worse public hygiene conditions with bringing new types of epidemics to Hungary such as Asian cholera, smallpox and fever. Besides, he argues for the role of insufficient nutrition, lack of fuel, gas and soap, long queues for food with the consequences of leaving the baby alone and being exposed to infectious diseases. According to him, the

[308] Ibid.
[309] *Magyar Statisztikai Évkönyv*, 1933, 25.
[310] Béla Szabó, "*Az 1926-1932. évi népmozgalom*" (Population Studies between 1926-1932) in Magyar Statisztikai Közlemények, vol. 97. (Budapest: Stephaneum Nyomda Rt., 1937), 22.
[311] *Magyar Statisztikai Évkönyv*, 1942, 33-34.

psychological consequences of all these war-related effects should not be neglected in terms of infant and child mortality.[312]

As for the countryside, among the eight categories, the highest infant mortality rate could be observed in the beginning of the interwar years in the Greek Catholic, Greek Orthodox and Roman Catholic communities with an average 20%. (for exact details see Appendix Table 16) A considerable difference can be observed between the data of the Jewish religion and the other religious groups. Throughout the interwar period, Jews had a lower infant mortality rate than the rest of the population both in Budapest and in other parts of the country. Their infant mortality rate was around 10-11% even in the beginnings of the 1920s compared to the19-20% rate of the Catholics, Calvinists and Lutherans.[313] Such a good result was not achieved by some confessional group even by the end of the examined period, around 1940, although the Roman Catholics, Calvinists and Lutherans came close to a 12-13% infant mortality rate by 1940.[314] It also has to be added that although the infant mortality rate of the Jews were the best in the interwar period, their results were stagnating and a smaller improvement was achieved than in other confessional groups. The explanation of the better infant mortality rate of the Jews may lie in their cultural characteristics as well as their developed housing conditions, faster urbanization and better social position.

It can be seen for the comparison of the data of Budapest and the countryside that Budapest had better result in each year between the two world wars. In 1920, when the national average was 19.3%, infant mortality rate in Budapest was only 16.8%.[315] By the end of the examined period, an average 13.4% infant mortality rate was characteristic of the countryside while in each religious groups in Budapest only an average of 8.6% infant

[312] Ferenc Torday, "A háborúnak és következményeinek befolyása Budapest gyermekegészségügyére" (The Influence of the First World War and its Consequences on the Child Health Care of Budapest) *Orvosi Hetilap* 65, no.10 (1921): 75.
[313] *Magyar Statisztikai Évkönyv*, 1925-1942, passim.
[314] *Magyar Statisztikai Évkönyv*, 1925-1942, passim.
[315] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1925, 76, 162.

mortality rate. Nevertheless, in 1932, infant mortality rate had worsened to a great extent in Budapest also, from 12.8% in the previous year, to 16.1% in 1932.[316]

Similarly to the general tendency in the countryside, the Jews had the lowest infant mortality rate in Budapest also. During the interwar years, it oscillated between 5.3% and 8.5% in Budapest, compared to the much worse results of the Greek Orthodox, Roman and Greek Catholics. Infant mortality rate of those three denominations were around 14-16% and even above 20% at the beginning of the 1920s.[317] Improvement was the slowest among the Calvinists who also had a rather hectic infant mortality rate. By 1940 they still had one of the highest percentage of deceased infants both in the capital and in the countryside[318], despite the fact that Calvinists had almost as many patients (82%) treated by medical doctors previously as the Roman Catholics and Lutherans. The best covered religious group was, however the Jews, among whom 93% died under medical control.[319] Unitarians however had one of the best results besides the Jews. Karády mentions in his study that Unitarians, similarly to the Jews, accepted secularization very early thus showed trends of modernization in terms of family life as well.[320] It also has to be added that Unitariand were a small population, not comparable to other religious groups in Hungary. Confessional differences in Hungary were in relation with multi-ethnicity. The majority of the Hungarian population was Roman Catholic who however had the worst infant mortality rate in 1940 in Budapest. They showed also one of the worst results in the countryside.[321] The explanation might be in relation with breastfeeding practices and differences according to confessional groups. Susan Cotts Watkins argues for the role of religion in breastfeeding tradition, claiming that breastfeeding

[316] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1932, pp. 94-95, 130.
[317] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1922, pp. 76, 162.
[318] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve,* 1941, pp. 99, 183.
[319] Béla Szabó, *Az 1926-32 közötti népmozgalom*, 64.
[320] Viktor Karády, "Egyenlőtlen polgárosodás. A zsidóság modernizációjának különleges tényezői Magyarországon" (Unequal Enbourgeoisment. The Special Features of Jewish Modernization in Hungary) in Karátson Endre, Várdy Péter (eds.), *Változás és állandóság: tanulmányok a magyar polgári társadalomról* (Transformation and Stability: Studies of the Hungarian Modern Society), ([S.I.]: Hollandiai Mikes Kelemen Kör, 1989), 158.

was seen asa moral, religious duty by Protestants while it was rejected and regarded shameful by some Catholic minorities. The existence of these differences is proved, however only in case of some countries, like in the Netherlands. Watkins admits also that while religion might influence breastfeeding, women's working pattern and community customs were more determining.[322] To sum up, the exceptionally good position of the Jewish families has to be emphasized, along with the Unitarians both in Budapest and in the countryside. The Roman Catholics, Calvinists and Lutherans however had higher infant mortality rate despite their good medical coverage and the relatively early modernization of Lutherans.

The relationship of confession and modernization has been researched by Viktor Karády. He came to the conclusion that inequalities can be observed in terms of modernization according to religious and ethnic groups.[323] He evaluated the role of economic capital, entrepreneurship talent and social reproduction in power relations. Based on his research, he claimed that the emerging new middle class in the 19th century was made up of Jews, Germans and Slavs. He emphasized the importance of the overwhelming presence of Jews, compared to Western-European countries. Until 1938, the Jews constituted the engine of Hungarian modernization, with 40-60% of Jewish men having a liberal profession or other middle class jobs, like private executive.[324] In his analysis concerning Jewish modernization, the significance of inner secularization was mentioned.[325] Secularization becomes important in connection with fertility and promotion of a small family model, so Karády's observation that the Jews had the highest level of secularization among religious groups already at the end

[321] *Magyar Statisztikai Évkönyv*, 1941, 99, 183.
[322] Watkins, *From Provinces into Nations: The Demographic Integration of Europe 1870-1960*, 19.
[323] Viktor Karády, "Egyenlőtlen polgárosodás. A zsidóság modernizációjának különleges tényezői Magyarországon" (Unequal Enbourgeoisment. The Special Features of Jewish Modernization in Hungary) in Karátson Endre, Várdy Péter (eds.), *Változás és állandóság: tanulmányok a magyar polgári társadalomról* (Transformation and Stability: Studies of the Hungarian Modern Society), ([S.I.]: Hollandiai Mikes Kelemen Kör, 1989), 141-167.
[324] Ibid, 146.
[325] Ibid, 157.

of the 19th century, becomes important in this respect also.[326] Besides secularization, he accentuates also the strong and effective moral control among Jewish families. The cult of family morals, involving hygiene in child-rearing, financial and moral support for the extended family[327] and ritual hygiene helped the survival chances of infants better than in other religious groups.[328] Karády pointed out also that the low rate of infant mortality among Jews was not due to solely religious reasons but to structural specificities as well.[329] Their developed modernization, education, desire to acquire a social position resulted in a high number of Jewish physicians. Between 1911 and 1915, 71% of Jewish children under 7 years of age received medical treatment before death certainly due, among other things, to the rich supply of Jewish physicians in contrast to the other denominations. Only 69% among the Calvinists infants, 68% of the Lutherans, 59% of the Catholics, 47% of the Unitarians, 31% of the Greek Orthodox and 24% of the Greek Catholics had the same advantage.[330] These different results in infant mortality rate prove that certain demographic patterns including mortality and fertility are in close connection with denominational and related cultural differences.

Interestingly, the main denominational tendencies remain identical in the comparison between religious groups and social layers (Appendix Table 18). The statistical data of Lajos Illyefalvi allow the comparison of three variables of infant mortality, denomination and social layer. In accordance with the above mentioned tendencies, Roman Catholics and Greek Orthodox had the highest rate of infant mortality both in the working and middle class. In absolute number, however the difference is surprising, while 27.8% of Greek Orthodox working class infants died in 1929, the result is only 1.4% in middle class Greek Orthodox

[326] Ibid, 158.
[327] Ibid, 163.
[328] Viktor Karády, "A halálozási kockázat egyes felekezeti összetevői Magyarországon a második világháború előtt és alatt" (Denominational Aspects of Death Risk n Hungary during and after the Second World War) in Kozma István, Papp Richárd (eds.), *Etnikai kölcsönhatások és konfliktusok a Kárpát-medencében* (Ethnic Interaction and Conflicts in the Carpathian Basin), (Budapest: Gondolat, 2003), 248.
[329] Ibid, 248.

families in 1931.[331] It also had to be added, that only 18 infants were born in Greek Orthodox working class families, among whom 5 died, and 70 infants were born to Greek Orthodox middle class families out of whom only 1 died, compared to the considerably higher 5779 Roman Catholic births. Besides Greek Orthodox, the Roman Catholics and Lutherans had the highest infant mortality rate among working class families. Jews had a significantly lower infant mortality rate similarly to the above mentioned tendency, with 8.5% in working class Jewish families which is however 10 times higher than in middle class Jewish families. Thus this deeper, structural analysis shows and proves that the above-mentioned modernization advantages of the Jews were confined to the middle class families. As opposed to the results according denominations, the Greek Catholic and Calvinist working class families had better results, closer to the Jewish working class families. In 1929, none of the Unitarian infants died, however only 12 were born compared to the several hundreds and thousands in other religious groups.[332] The survival chances in case of the middle class were the same in each confessional group, with an infant mortality rate of 0.8-1.5%.[333] Moreover, it is also worth comparing the number of live-born in the working and middle class since huge differences can be discovered. From the data, it can be calculated that on average three times as many infants were born in each confessional groups in the middle class than in the working class. This is a surprising result, in contradiction with the general tendency that more working class babies were born. The explanation might be in relation to the survey size and the fact that fewer working class respondants were reached. In case of the Jews, middle class families had

[330] Ibid, 248-249.
[331] The two year difference between the data is due to the different compilation date among the working and middle class population. Nevertheless, it does not influence the main tendencies. Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten*, 86-87, 126. Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai*, 79-81, 146.
[332] Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten*, 86-87, 126.
[333] Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai*, 79-81, 146..

even 20 times more infants which underpins Karády's statement that the father in most Jewish families had a middle class, liberal profession. [334]

4.3 Legitimacy Status as an Influencing Factor in Infant Mortality Rate

Illegitimate infants had fewer rights than babies born in marriage. Besides, they were often a burden for their mothers, often having bad financial situation. Their endangered situation was increased further by their stigmatization and religious fanatism that held them less valuable than legitimate children.[335] Respectively, illegitimate children constituted a great majority among infants who died early. Their birth and death were the result of a variety of social factors with which this subchapter will be engaged. Data and information about social circumstances is provided by Lajos Illyefalvi for the 1920s and 1930s in Budapest. Both the number of illegitimate births and deaths were registered thus the rate of illegitimate infants dying in the first year of their life can be calculated as the proprtion of illegitimate deaths and among illegitimate births of the same period.

Results show that in a large number of cases the number of babies born outside marriage was high throughout the interwar period, an average 32% but in 1925 their rate reached even 40.3%. By 1940, still every 4th infant (26.6%) belonged to the illegitimate births[336] (see Appendix Table 19). Besides their overrepresentation among births, also a high amount of them died as infants, around 30% in the beginning of the 1920s. This proportion showed a decreasing tendency in the interwar period. By the 1930s, only 20% of illegitimate live-born died, which decreased further to 14% by 1939.[337] The Second World War brought further decline both in the rate of illegitimate births and especially in case of the rate of

[334] Ibid.
[335] Leó Szokolay, *A házasságon kívül született gyermek mint csecsemővédő probléma* (Children Born Outside Marriage as Infant Care Problem), (Budapest: Magyar Királyi Állami Nyomda, 1939.), 4-7, 12.
[336] Calculation, based on Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1925-1942, passim.

illegitimate deaths from all infant deaths that decreased dramatically in one year from 26.6% to 17.8% by 1941.[338] It might be the result of the reattachment of territories to Hungary and the different population involved in the statistics that could counterbalance the high rate of illegitimacy characteristic mainly of Budapest.[339] The number of illegitimate children was also in connection the number of marriages that were influenced by the First World War and also the economic crisis in the 1930s.[340]

The majority of illegitimate babies were born to domestic servants who were mainly young girls coming from poor families in the countryside.[341] 87% of the domestic servants were unmarried, while 67% of them were younger than 35 years of age. Only 29% belonged to the age-group between 36 and 40, and only 7% were older than 40 years of age.[342] Viktor Karády examined further the chances of getting into the position of a domestic servant according to confession and the father's profession. According to his findings, religious groups were represented to a dissimilar degree. Catholics and Calvinists were present among domestic servants stronger than their proportion in the total population, while Lutherans were underrepresented. The main difference however lies again between Jews and non-Jews, as Jewish females were clearly underrepresented among domestic servants.[343] From 1938, their proportion slightly increased, most probably due to the effects of the Anti-Jewish legislation, the missing Jewish men and the thus weakening family networks.[344] Moreover, further

[337] Calculation, based on Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1925-1942, passim.
[338] Calculation, based on Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1925-1942, passim.
[339] Gabriella Grimm, *A házasságon kívül született gyermek mint csecsemővédő probléma* (Children Born Outside Marriage as Infant Care Problem), Országos *Stefánia* Szövetség, Az Anyák és Csecsemők védelmével államilag megbízott szervezet kiadványa, no.126. (Kalocsa: Árpád Rt. Könyvnyomdája, Szent-István u. 31., 1937.), 27.
[340] Gabriella Grimm, *A házasságon kívül született gyermek mint csecsemővédő probléma*, 15-16.
[341] Viktor Karády, "Felekezet, cselédsors és szexuális deviancia az 1945 előtti Budapesten" (Denomination, Domestic Servants and Sexual Deviancy in Budapest before 1945) in Karády Viktor, *Zsidóság és társadalmi egyenlőtlenségek, 1867-1945*. Történeti-szociológiai tanulmányok. (Jewry and Social Inequalities, 1867-1945. Historical-Sociological Studies), (Budapest: Replika Kör, 2000), 147.
[342] Gábor Gyáni, *Women as Domestic Servants: The Case of Budapest, 1890-1940* (Institute of East Central Europe, Coumbia University, 1989.), 18.
[343] Viktor Karády, "Felekezet, cselédsors és szexuális deviancia az 1945 előtti Budapesten", 144.
[344] Ibid, 145.

diversities can be found according to the father's profession and social position. Karády pointed out that daughters of urban, self-employed fathers were less likely to become domestic servants, while 86% of domestic servants came from craftsmen and agricultural worker families.[345] These families were extremely poor, in the majority of the cases without houses, landed-property or rented property. Besides agricultural workers, day-laborers were the second most widespread profession of the fathers of domestic servants.[346]

Besides, the correlation of religious denomination and domestic service, Karády examined also the rate of illegitimate births in different religious groups. Once again, his study shows that Jews had a considerably lower illegitimate birth rate, than the Roman Catholics and Protestants. The formers' of illegitimate births was one-third of the proportion in other confessional groups.[347] The 1938 Anti-Jewish legislation however brought changes in this pattern also. Both in case of giving birth to more babies outside marriage and abortion, the results of Jewish women doubled.[348] It shows the influencing factor of living circumstances, pressure, and behavioral change as a response that can be traced well in case of illegitimacy.

A special set of database was compiled by Lajos Illyefalvi in 1925. He collected the information about the living circumstances of unmarried couples. In his statistics he included the size of the flat occupied by such couples. His results show that the majority of unmarried couples lived in a 1 or 2 room flat (90% in 1920, 94% in 1925), while very few couples could afford 3 or more room flats, only 6.5% of them lived in 3-room flats, and a mere 3.8% had flats with 4-8 rooms in 1920.[349] (see Appendix Table 20) This shows that the living circumstances of illegitimate couples and their children were much under the standards of

[345] Ibid, 146-147.
[346] Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten*, 665.
[347] Viktor Karády, "Felekezetek és születéskorlátozás Budapesten (1880-1945). Népességszociológiai kísérlet." (Denomination and Birth-control in Budapest (1880-1945). A Study in Population Sociology.) in Elekes Zsuzsanna, Spéder Zsolt (eds.), *Törések és kötések a magyar társadalomban* (Disruptions and Junctions in Hungarian Society), (Budapest: Századvég, 2000), 383.
[348] Ibid, 383, 387.

married couples. Besides their living circumstances, their financial situation confined their ability to take care of their baby. Often, domestic servants had to get rid of the baby, in order to continue their work. In the 1920s, only 2000 places were available in asylums[350], which was less than half of what would have been needed.[351] Those infants who had no place were given to a wet-nurse or to relatives. In 1927, 11% of the domestic servants working in Budapest had children who were taken care of by the parents of the baby (32.7%), relatives (18.5%), wet-nurse (28.6) and only 5.2% of them had a place in an asylum.[352] Those babies given to wet-nursing were exposed to the greatest risk due to careless nursing. In order to improve the situation, special associations were founded, whose main aim was to help domestic servant mothers. The Saint Zita Circles, Márta Association aimed at helping to educate domestic servants, find them new jobs or give legal help to mothers.[353] By 1931, 67% of illegitimate babied and their mothers were under the protection of the *Stefánia* Association.[354] Nevertheless, by the interwar period the proportion of illegitimate children and their death risk did not decline considerably as shown by the statistics (Appendix, Table 18).

According to Morel, in France already in the 1760s measures were introduced to encourage breastfeeding instead of given babies to wet-nurse. It proves that the lethal nature of wet-nursing had been recognized already in the 18th century which however did not impede its survival until the Second World War. In Paris, Lyon and Rouen, allowance was given for poor working mothers to enable them to breastfeed their babies. Morel concludes that based on a limited set of evidence, the advantage of breastfeeding can be proved.[355]

[349] Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1927, 58.
[350] Gábor Gyáni, *Család, háztartás és városi cselédség*, 214.
[351] The number of illegitimate births was above 3000 per year in the interwar years. Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*, 1925-1942, passim.
[352] Gábor Gyáni, *Család, háztartás és városi cselédség*, 215.
[353] Ibid, 232.
[354] Gabriella Grimm, *A házasságon kívül született gyermek mint csecsemővédő probléma*, 35.
[355] Marie-France Morel, "The Care of Children: the influence of Medical Innovation and Medical Institutions on Infant Mortality 1750-1914", 201.

Tibor Barabás, Hungarian writer between the two world wars devoted a novel, with the title *Life of a Miner* [356] to draw a portrait of a Hungarian worker. In his accounts descriptions can be found about the living circumstances of domestic servants. "My name is József Szó. I was born on 24 October 1872, in a small village of Somosújfalu, in Nógrád county. My parents were domestic servants in the Radvánszky manor, in Somosújfalu. I was born there, in one of the servant rooms of the manor. My cradle would have been rocked there, if I had a cradle and somebody to rock me. At that time, a domestic servant was clearly a servant of his landlord. A child of a domestic servant could have died without being noticed by the landlord. It was known that being a domestic servant was the lowest social rank. At that time hat-makers, shoe-makers, locksmiths and blacksmiths were addressed as "Mr". Only the domestic servants were the foot-rag of everyone."[357] It is clearly stated that domestic servants were servants in the strict sense of the word and were the least respected profession, available for working class fathers and mothers. Domestic servant maids experienced uprootedness and poverty and were exposed to the harassment of their middle class employer. Besides, domestic servant maids were more open to relationships and to entertainment.[358] In both situations they were exposed to having an illegitimate child.

"On 21 October 1895 I left my mother's house and moved to our own home with Julianna Mocsány. We lived as husband and wife, in love and respect. At that time no official bond tied us together, nevertheless we were equally happy. I do not write this to boast but to

[356] Tibor Barabás, *Egy bányász élete* (Life of a Miner) in Tibor Barabás, *Aranyfácán* (Gold Pheasant) (Budapest: Magvető kiadó, 1968.), 45.
[357] "Nevem: Szó József. 1872. október 24-én születtem, a Nógrád megyei Somosújfalun. Szüleim a Somosújfaluban lévő báró Radvánszky-uradalom cselédei voltak. Itt születtem, az uradalom egyik cselédházában, itt ringatták volna bölcsőmet, ha ugyan lett volna bölcsőm és aki ringasson. A cseléd akkoriban rabszolgája volt az úrnak. Előbb elpusztulhatott egy cseléd gyermeke, semhogy az "úrdolgát" elmulasztotta volna. Tudott dolog, hogy a cselédnél alacsonyabb rang nincsen. Úrnak szóljtották ezidőtájt kalapost, cipészt, lakatost és kovácsmestert és mindenféle más mesterembert. Csak a gazdasági cseléd volt mindenki kapcája." (Tibor Barabás, *Egy bányász élete*, 9.)
[358] Viktor Karády, "Felekezet, cselédsors és szexuális deviancia az 1945 előtti Budapesten", 153, 157.

show the people that those united by true love will be blessed even in time of despair."[359] This quotation shows that cohabitation was increasingly accepted before the interwar period. József Szó had no reason not to marry Julianna Mocsány but they decided to live together and have children without marriage and were not ashamed of it, on the contrary they aimed at promoting love as opposed to a marriage of convenience. This shows the changing mentality of people about marriage, at least among domestic servants.

The analysis of socio-economic variables and their relation to infant mortality proved further the existing inequalities, as huge differences could be observed according to the father's profession. Self-employed, officer middle class fathers could provide better circumstances than day-laborers, assistants, journeymen or craftsmen. Inequalities were further diversified by denomination. Based on statistical data and researches of Viktor Karády, it can be said that Jews had a systematically better position than other denomination mainly due to their early modernization. Besides, Protestants had better infant morality rate, as opposed to the high rate of infant death among Roman and Greek Catholics and Greek Orthodox. In relation to the above mentioned results, the legitimacy status of infants proved to be crucial. Statistics clearly shows that infants of married couples had better chances for survival than their illegitimate counterparts. Even among the self-employed and officers illegitimate infant mortality rate was higher than the death rate of legitimate infants. Further research of these variables could contribute to the understanding of social inequalities of the demographic transition in interwar Hungary and to the analysis of the demographic aspects of social modernization.

[359] 1895. október 21-én elhagytam anyám házát és közös háztartásra léptem Mocsány Juliannával. Úgy éltünk egymást szeretve és becsülve, mint férj és feleség. Akkor még hivatalos kötés nem fűzött minket egybe, mégis egyformán boldogok voltunk. Nem azért írom ezt, hogy valamivel is hivalkodjam, hanem hogy lássák az emberek, hogy akiket nem az érdek, hanem a szív egyesít, azokat nem hagyja el tengernyi baj közepette sem a szeretet áldása. (Tibor Barabás, *Egy bányász élete*, 23.)

CONCLUSION – THE STORY BEHIND THE NUMBERS

In the interwar years Budapest was a multi-ethnic, multi-confessional, multi-cultural metropolis, not much different from the previous decades and the years coming after it. So, the question is that what gives the importance of these 20 years. Surely, behind the political scenes, a rapid, dymanic population development took place. As part of the demographic transition, death and birth rates changed dramatically bringing increased survival chances, increased inequalities, a new family model and possibly behavioral changes also. Improvements were not confined only to the growing life-expectancy but affected the quality of life as well as the health infrastructure – at least for some layers of society. Thank to the preserved statistical yearbooks, social inequalities of the Budapest population could be mapped and described in details. Obviously wealthy families had better chances to care for their infants. Statistical data tell us who were these families and what characterised them. Being a middle class, private official, Jewish husband, living in the 4th or 5th districts meant that one could provide the best living circumstances and available medical care for his family. The opposing pole would live in Kőbánya with his spouse, having illegitimate infants, working in bad hygienic circumstances as an industrial worker or craftsman, belonging to the Roman Catholic or Calvinst religion or to the Greek Orthodox minority. Between the extremities, the majority of the population lived an average way of life in a two-room flat somewhere in the 6-10th districts, having jobs as craftsmen, assistants, officers or self-employed, not far from one of the hospitals in Budapest and covered by medical and old age insurance. Still, these families were not neglected by the awakening social reform programs in the 1920s and 1930s. Stories of health visitors of the *Stefánia* Association and *Zöldkeresztes* Movement tell us what a bottle of milk meant to thousands of families in Budapest.

Meanwhile, in the countryside, silent, devoted, diligent work of young girls saved thousands of lives. The unique Hungarian system of health visitors offered education for girls

finished their secondary studies. The *Stefánia* Association, *Zöldkeresztes* Movement and *Alföldi Csecsemővédő Egyesület* were established in the interwar years with the aim of helping mothers and infants. Health visitors talked to the village population in their language with the help of educative posters, lecture series and short booklets that changed whole villages' attitude towards infants. Interwar physicians and health care staff aimed at being not only medical help, but also social workers, supporters, even friends of the mothers in order to achieve behavioral changes, break the ruling superstitions, and substitute the absence of hospitals. Their accounts show the importance of a new approach to life, hygiene and to infant care – that of a modernized, urbanized city-dweller.

The interwar years constituted a significant period of population development and the first demographic transition. Part of the demographic transition, the infant death rates changed dramatically both in Budapest and in the countryside. Infant mortality rate in itself is an indicator of a crucial demographic process. Added to this, however, the changing rate of survived infants shows deeper social and cultural changes as well. Having these thoughts in mind, the thesis aimed at mapping the social determinants of infant mortality. Measurable and unmeasurable network of causes determined infant mortality rate in interwar Budapest. Especially those variables measurable quantitatively were in the focus of attention. The analysis on some of these variables was a rare opportunity made possible by the heritage of the systematic, careful Habsburg data compilation system preserving information on the colourful population of the Monarchy and later Hungary. Examining the occupational, confessional and other social aspects of a multicultural society proved to be an interesting and ambitious task and helped to map the living circumstances of the Budapest population.

In the interwar years, Hungary approached the third stage of convergence according to the theory of Susan Cotts Watkins as regional diversities between parts of the country started to decrease in the 1930s though the development continues further after the Second World

War as well. As for the second examined aspect of Watkins' theory, in terms of the urban-rural differences, the Hungarian development proved to be slower with considerable differences in the interwar years. Nevertheless, the demographic transition brought significant changes in Hungarian mortality patterns in the interwar years. Though in some fields, urgent improvement were needed such as in the case of illegitimate children, housing conditions and wider insurance coverage. On the eve of the Second World War, illegitimacy still remained one of the greatest causes of infant mortality. The problem of unwanted babies without sufficient legal and financial protection was recognized in the interwar years and were discussed in medical literature, however further steps were needed to be done. Nevertheless, with the decreasing infant mortality rates and smaller territorial differences Hungary started to converge to the Western European norms.

Aspects of the thesis showed the complexity of infant mortality determinants as well as their mutual effect. Not all social variables were involved in the research while the equally important and inseparable biological determinants and their role should not be ignored also. Resideny and socio-economic position of a family determined their possibilities in terms of nutrition and also types of diseases catched by infants. In this understanding, social determinants of infant mortality rate provided the setting for death causes.

Multiculturality, variety and polarization have always been and will be necessary belongings of a metropolis. Consequences of social inequalities are measureable in various fields of life, including demography. Historical demographic studies aim at describing a population of a particular territory in order to provide deeper insight into its history. They aim at discovering the "story behind the numbers".

APPENDICES

Table 1 – Territorial Distribution of Infant Mortality Rate in Interwar Hungary (given in %)

County	1920	1925	1928	1930	1935	1938	1940	1941	1942
Right bank of the Danube									
Baranya	23.2	18.5	17.4	16.3	13.7	10	11.8	10.9	11.8
Fejér	18.1	14.7	16.7	13	12.5	12.2	11.7	12.7	13.3
Győr	18	13.6	13.5	12.2	12 [a]	12.1 [a]	11.1 [a]	9.9 [a]	11 [a]
GYŐR	18	14.1	13.1	11	12.7	8.7	10.9	8.6	12.3
KOMÁROM-ÚJVÁROS	21.7	-	-	-	-	-	8.3	5.1	10.7
Komárom	18.3	16.3	15.9	13.7	12.2 [b]	10.9 [b]	11.1	11.1	12.6
Moson	20.8	15.5	13.2	13.2	12 [a]	12.1 [a]	11.1 [a]	9.9 [a]	11 [a]
PÉCS	22.9	14.5	12.8	13.1	15.8	13.4	10.3	15.1	15.3
Somogy	21.2	18.9	19.4	19.7	16.4	14.7	15.2	13.6	14.5
Sopron	19.1	14.3	14.4	13.4	14	11.7	11.3	10.9	12.7
SOPRON	14.8	9.1	7.8	6.7	9.6	7	9.8	7.5	7.9
SZÉKESFEHÉRVÁR	16.4	9.5	12.8	11.7	10.3	10.2	9.6	9.7	10.9
Tolna	19.6	15.3	14.8	13.9	13.2	12.4	11.2	9.8	11.3
Vas	17.6	13.2	14.6	11.9	11.7	11.3	10.4	9.8	11.7
Veszprém	19.9	16.7	18.3	15.8	14.2	13.1	12.6	11.7	13.8
Zala	18	17.3	17.8	16.6	15.1	12.9	13.3	12.2	14.4
Total	19.4	16	16.4	14.9	13.7	12.2	-	-	-
Left bank of the Danube									
Esztergom	21.4	17	18.9	15.1	12.2 [b]	10.9 [b]	10.8	10.7	11.2
Hont	19.4	13.2	17	14	13.8 [h]	14 [h]	11.3 [j]	10.4 [j]	11.5 [j]
Nógrád	18.8	16.5	19.1	14.5	13.8 [h]	14 [h]	14	12.5	13.2
Pozsony	18.8	13.6	14	15	12 [a]	12.1 [a]	13.7 [k]	12.7 [k]	15.8 [k]
Total	19.4	16.4	18.9	14.6	-	-	-	-	-
Mid-Hungary (between the Danube and Tisza)									
Bács-Bodrog	19.7	19.3	17.4	16.2	15.9	14.3	16.2	13.3	13.9
BAJA	15.7	15.6	15.3	11.4	11.3	9.5	-	-	-
BUDAPEST	18.1	12.4	12	11.4	12	8.6	9.7	8.9	10.7
Csongrád	19.4	17.7	18.8	16.4	16.4	13.8	12.7	11.5	11.6
Heves	22.6	19.9	21.7	18	17.1	16	16.3	13	14
HÓDMEZŐVÁSÁRH.	14.2	14.4	13.6	15.1	15.2	10.8	10.6	6.4	9.2
Jász-Nagykun-Szolnok	18.4	16.5	18.4	14.1	15.2	13	13.4	11.2	12.5
KECSKEMÉT	21.4	18	21.7	15	21.2	15.9	16.7	15.2	18.8
Pest-Pilis-Solt-Kiskun	18.7	16.2	18.3	14.9	15.6	13.8	12.7	11.7	14.5
SZEGED	16.5	16.1	17.6	15.1	16.5	12.8	10.6	9.6	10.4
Total	19	16.1	17.4	14.5	16 [f]	13.2 [f]	-	-	-
Right bank of the Tisza									
Abaúj és Torna	16.8	16.9	17.9	16.8	14.9	13.5	13.7	14.5	16
Bereg	22.9	20.4	20	17.7	16.7 [e]	14.7 [e]	16.6	16.2	18
Borsod	20.3	18.4	18.6	15.3	15.3 [g]	14.5 [g]	15.5	11.7	13.8
Gömör és Kishont	17.1	14.3	15.4	13.8	15.3 [g]	14.5 [g]	13.4	13.5	14.5
KASSA	-	-	-	-	-	-	13.3	11.1	16.2
Máramaros	-	-	-	-	-	-	16.7	16.1	19.4
MISKOLC	15.5	13.7	18	14	16.2	16.2	15.9	13.9	18
Ugocsa	-	-	-	-	16.7 [e]	14.7 [e]	19.2	16.5	19.1
Ung	26.2	22.9	14	9.6	17.1 [d]	15.7 [d]	14.6	12.2	10.7
UNGVÁR	-	-	-	-	-	-	11.9	12.1	14.9

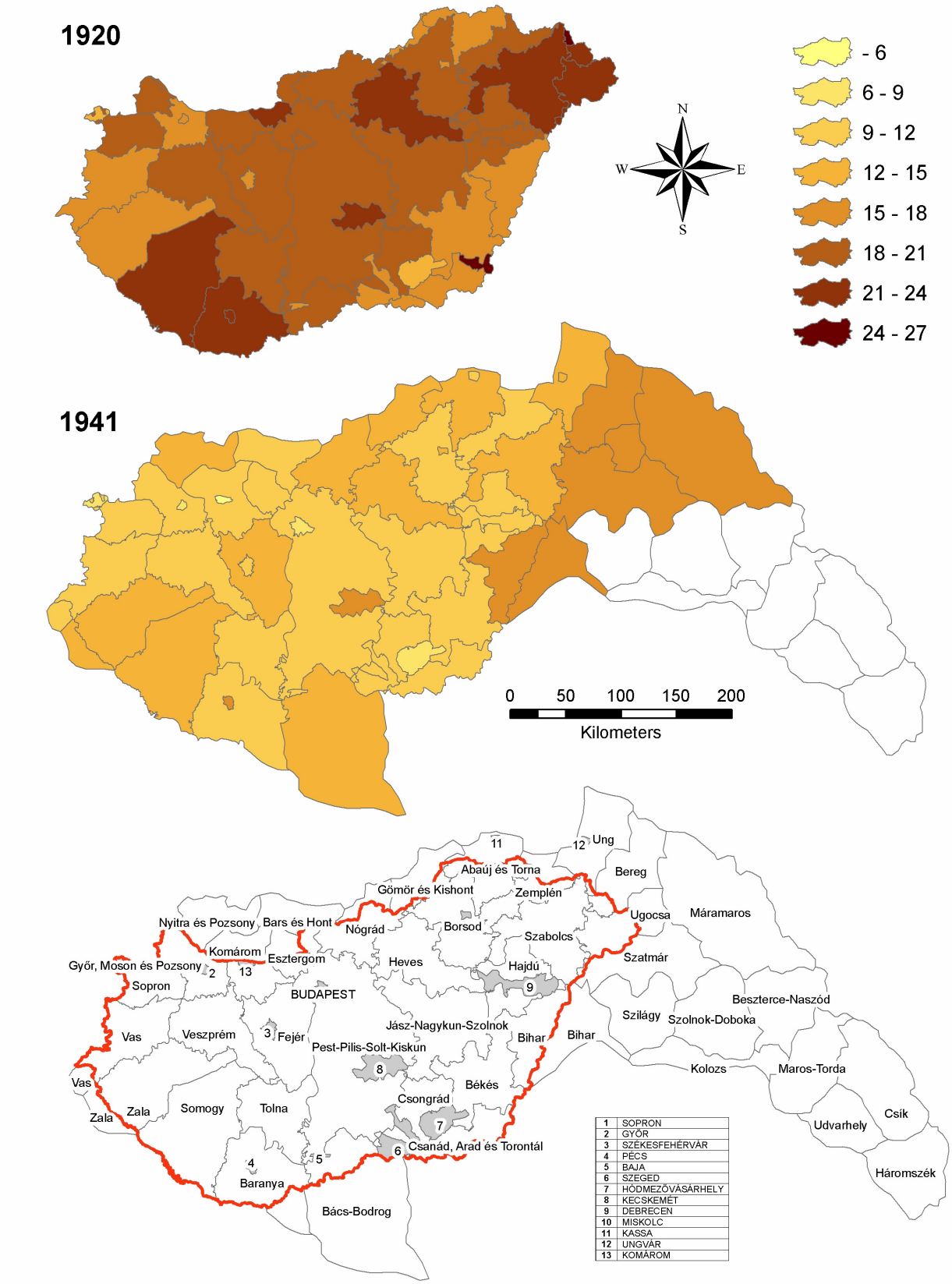
Zemplén	20.3	17.5	17.4	15.2	14.7	12.6	15.3	11.6	13.9
Total	19.5	17.6	18.2	15.5	15.4[i]	14.5[i]	-	-	-
Left bank of the Tisza									
Békés	16.4	16	18.5	15.4	18	14.3	12.5	10	12.1
Bihar	18	18.4	18.5	14.8	16.8	13.9	15.8	15.6	19.2
DEBRECEN tjv	18.8	18.1	19.1	17.7	17.7	14.7	13.2	11.8	16.4
Hajdú	20.2	18.5	19.3	16.3	20.1	15	12.9	11.3	15.3
Szabolcs	21.6	20.6	20.5	19	17.1[d]	15.7[d]	14.3	13.3	17.5
Szatmár	23.4	22.9	21.8	19.5	16.7[e]	14.7[e]	17	16.5	19.1
Total	19.7	19.1	19.7	17.3	16[f]	13.2[f]	-	-	-
Territory between the Tisza-Maros rivers									
Arad	26.2	22.1	23.2	16.6	17.2[c]	13.3[c]	13.7[c]	10.3[c]	10.8[c]
Csanád	17.5	16.7	19	15	17.2[c]	13.3[c]	13.7[c]	10.3[c]	10.8[c]
Torontál	15.7	17.1	18.1	12.8	17.2[c]	13.3[c]	13.7[c]	10.3[c]	10.8[c]
Total	18.7	17.6	19.6	15.1	17.2[c]	13.3[c]	13.7[c]	10.3[c]	10.8[c]
Hungary	**19.3**	**16.8**	**17.7**	**15.2**	**15.2**	**13.1**	**13.4**	**12.8**	**14.9**
Counties	19.5	17.3	18.3	15.7	15.4	13.6	-	-	-
Municipal towns	18	13.8	14.3	12.8	14	10.6	-	-	-

Source: *Magyar Statisztikai Évkönyv*, Új Folyam, volumes XXVII-XLIX (Budapest, Az Atheneum Irodalmi és Nyomdai Részvénytársulat könyvnyomdája, 1925-1943.), passim. György Acsádi, Klinger András, *Magyarország népesedése a két világháború között* (The Population of Hungary between the Two World Wars) (Budapest: Közgazdasági és Jogi Könyvkiadó, 1965), 51.

Comments:

The names capitalized are the municipal towns, the others are the counties of Hungary.
[a] Győr, Moson and Pozsony counties between 1923-45.
[b] Komárom and Esztergom counties between 1923-38.
[c] Csanád, Arad and Torontál counties between 1923-45.
[d] Szabolcs and Ung counties between 1923-38.
[e] Szatmár, Ugocsa and Bereg counties between 1923-28.
[f] Alföld counties total (Counties between the Danube and the Tisza, counties on the left bank of the Tisza, Szabolcs, Ung, Szatmár, Ugocsa and Bereg with the exception of Heves).
[g] Borsod, Gömör and Kishont counties between 1923-38.
[h] Nógrád and Hont counties between 1923-38. között
[i] Counties of North Hungary total (Nógrád, Hont, Heves counties and the counties of the right bank of the Tisza, with the exception of Szatmár, Ugocsa, Bereg, Szabolcs and Ung counties).
[j] Bars and Hont counties between 1938-45.
[k] Nyitra and Pozsony counties between 1938-45.

Map 1 – Infant Mortality Rate of Hungary in 1920 and 1941 (given in %)



Source: Magyar Statisztikai Évkönyv, Új Folyam, volumes 1925-1942,
Budapest: Az Atheneum Irodalmi és Nyomdai Részvénytársulat könyvnyomdája, 1925-1942.

Table 2 – Infant Mortality Rate of some Hungarian towns and Counties (1920-1941) (given in %)

County	1920	1935	1941
Baranya county	23.2	13.7	10.9
PÉCS	22.9	15.8	15.1
Fejér county	18.1	12.5	12.7
SZÉKESFEHÉRVÁR	16.4	10.3	9.7
Győr county	18	12 [a]	9.9 [a]
GYŐR	18	12.7	8.6
Komárom county	18.3	12.2 [b]	11.1
KOMÁROM-ÚJVÁROS	21.7		5.1
Sopron county	19.1	14	10.9
SOPRON	14.8	9.6	7.5
Bács-Bodrog county	19.7	15.9	13.3
BAJA	15.7	11.3	
Csongrád county	19.4	16.4	11.5
HÓDMEZŐVÁSÁRHELY	14.2	15.2	6.4
SZEGED	16.5	16.5	9.6
Pest-Pilis-Solt-Kiskun county	18.7	15.6	11.7
KECSKEMÉT	21.4	21.2	15.2
Borsod county	20.3	15.3 [g]	11.7
MISKOLC	15.5	16.2	13.9
Hajdú county	20.2	20.1	11.3
DEBRECEN	18.8	17.7	11.8

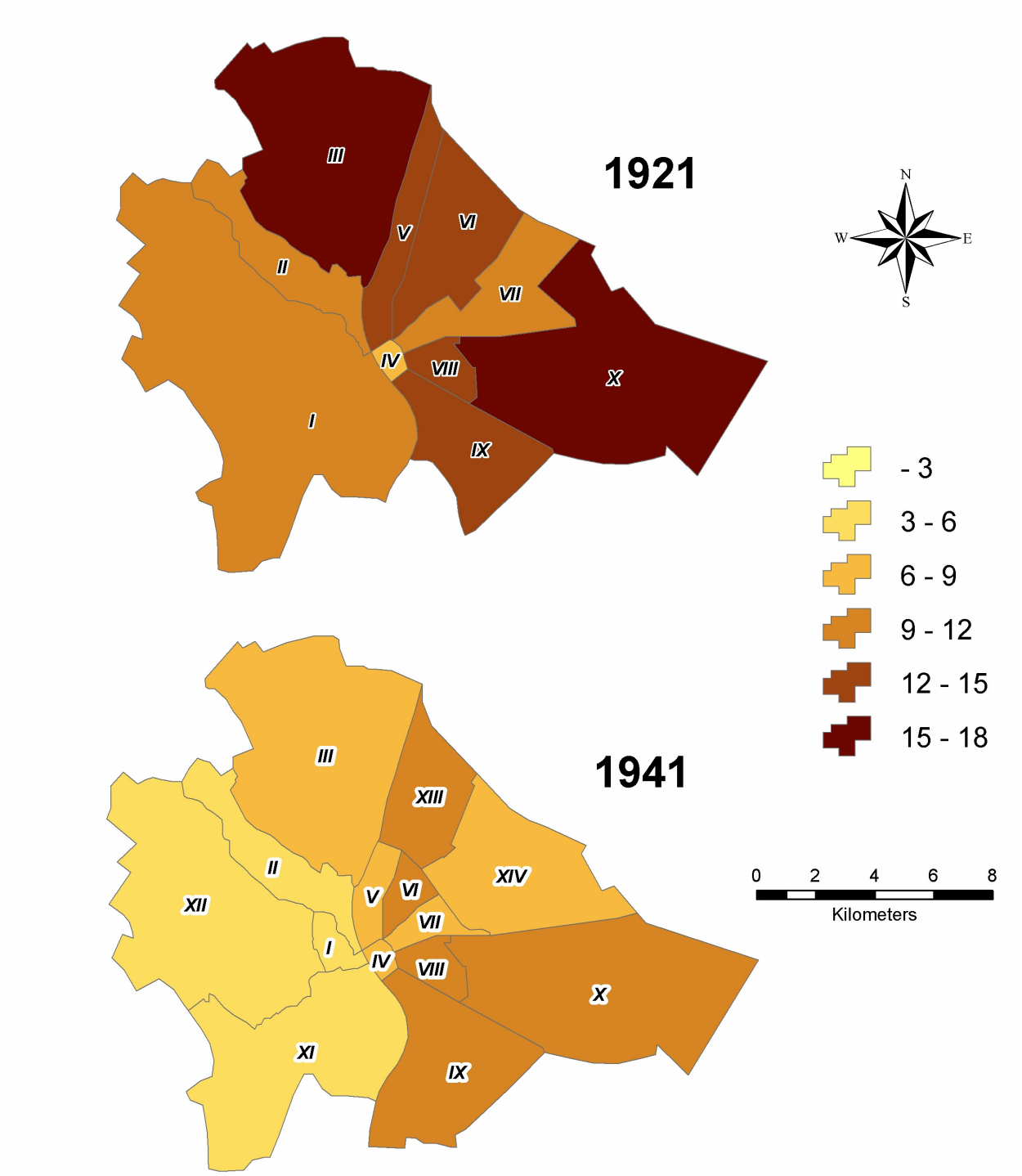
Source: *Magyar Statisztikai Évkönyv*, Új Folyam, Volumes XXXII, XXXIX, XLVIII, (Budapest, Az Atheneum Irodalmi és Nyomdai Részvénytársulat könyvnyomdája, 1925, 1936, 1942), pp. 22, 19, 27.

Table 3 – Infant Mortality Rate in the Districts of Budapest (1921-1941) (given in %)

District	1921	1936	1941
I	11.3	5.6	4.1
II	10.1	4.7	4
III	15	11.7	8.1
IV	8.9	5.5	7
V	12.9	9	6.2
VI	14	13.7	10.1
VII	10.9	13.8	8.6
VIII	12.1	9.5	9.4
IX	14.3	10.8	11.5
X	17.7	13.5	12
XI	-	8.3	5
XII	-	-	6
XIII	-	-	9.8
XIV	-	-	6.4
Total	**16**	**11.6**	**9.8**

Source: Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XIII, XXV, XXXI, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1925-1942.), pp. 75, 160, 143, 184, 58, 117.

Map 2 – Infant Mortality Rate in Budapest (1921 and 1941) (given in %)



Source: Lajos Illyefalvi, Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve (Statistic and Administrative Yearbook of Budapest), Vol. 1925-1942 (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1925-1942)

Table 4 – Public Utilities and other Equipments of Budapest flats according to Districts (1930) (given in %)

District	Running water	Gas and electricity	Central heating and hot water	Flushing toilets	Strip floor	Parquet floor	Wallpaper	Painted walls	Whitewashed walls
I	83.2	50.5	4.5	68.8	47.5	50.2	5.3	79.1	15.7
II	80.6	52.7	6.4	65.5	45.5	52.8	10.5	76.2	13.3
III	41.8	14.6	0.2	26.5	83.3	12.7	0.8	68.5	30.7
IV	88.1	59.8	8.7	73.1	31.3	66.8	18.3	73.4	8.2
V	90.9	62.2	9.9	70.6	40.5	58.4	18.8	71.9	9.3
VI	71.5	32.2	1.1	48.4	65.5	32.3	5.1	78.4	16.4
VII	83.9	33.7	1.2	47.1	60.6	37.2	3.9	85.6	10.5
VIII	83.9	33.2	1.1	45.6	62.6	35.6	3.1	88.2	8.7
IX	78.7	31.1	0.4	46.5	66.6	29.9	2.9	82.1	15.1
X	56.9	20.1	0.2	47.8	86.9	9.7	0.9	69.9	29.2
Total	**76**	**39**	**3.4**	**54**	**59**	**38.6**	**6.9**	**77.3**	**15.7**

Source: Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XXI, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1933.), 24.

Table 5 – Number of Deceased Infants according to Financial Categories in Budapest (1921-1929)

	Wealthy	Middle Class	Poor	Indigent
1921	1	82	992	49
1922	1	65	918	6
1923	0	49	727	5
1924	3	38	647	3
1925	1	33	507	6
1926	2	15	391	3
1927	2	25	379	8
1928	1	54	403	10
1929	1	27	415	4

Source: Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XI-XX, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1921-1929), passim.

Table 6 – The Location of Budapest Flats in 1925 – Workers and Middle Class Compared (given in %)

	Cellar	Base-ment	Down-stairs	½ floor	1st fl.	2nd	3rd	4th	5th	More floors	Attic
Workers	0.75	0.7	55.6	1.76	18.9	13.1	7.4	1.2	0.56	-	
Industrialists	0.3	0.28	38.5	1.79	23.5	19.1	12.5	3.1	0.84	0.02	0.03
Tradesmen	0.12	0.15	26.7	1.7	26.8	21.9	16.2	5.1	0.87	0.04	0
Private off.	0.04	0.18	24.3	1.8	24.4	21.4	18.9	7.1	1.68	0.06	0.03
State off.	0.02	0.3	28.6	1.8	24.7	21.8	16.2	5.2	1.16	0.04	0.04

Source: Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai* (Social and Economic Circumstances of the burgeois population in Budapest), (Budapest: Budapest Székesfőváros Statisztikai Hivatala 1935.), 186.. Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten* (The social and economic conditions of the working class in Budapest), (Budapest: Budapest Székesfőváros Statisztikai Hivatala, 1930.), 143.

Table 7 – The Number of Rooms according to Social Standing in 1935 – Workers and Middle Class Compared

Rooms	Workers	Public service workers	Industrialists	Tradesmen	Private officials	State officials
1	71 424	10 620	7 910	3 250	7 491	4 788
2	11 076	2 648	6 332	4 537	11 502	9 216
3	1 004	167	2 253	2 709	5 634	5 257
4	108	17	757	1 104	2 224	2 077
5	13	3	201	285	667	586
6	2	-	78	90	208	133
7	-	-	16	20	99	56
8	-	-	8	11	42	18
8-	-	-	8	4	25	20
Total	**84 869**	**13 478**	**17 645**	**10 027**	**27 917**	**22 157**

Source: Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XV, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1927.) 183.

Table 8 – The Number of Hospitals and Other Types of Health Care Organizations according to Function and Maintenance in Hungary (1940)

Type of maintenance	University clinics	General hospitals	Private hospitals	Private sanatoriums	Special health care institutes[360]	Total	Share from 100%
State-funded	6 339	8 408	-	-	4 962	**19 709**	**33.9**
Municipal	-	20 387	1 442	-	417	**22 246**	**38.3**
Health insurance companies	-	-	2 707	-	244	**2 951**	**5.1**
Church	-	1 801	1 705	-	66	**3 892**	**6.4**
Social organizations	-	2 152	276	-	3 128	**5 556**	**9.6**
Industry and mines	-	-	830	-	-	**830**	**1.4**
Manors	-	-	115	-	15	**130**	**0.2**
Private companies	-	-	-	2 279	702	**2 981**	**5.1**
Total	**6 339**	**32 748**	**7 075**	**2 279**	**9 654**	**58 095**	**100**
Distribution of beds (%), share from 100%	**10.9**	**56.4**	**12.3**	**3.9**	**16.5**	**100**	**100**

Source: Kornél Scholtz, *Magyarország kórházai és más gyógyintézetei az 1940. évben* (Hungarian Hospitals and Other Health Care Institutions), (Budapest: Magyarország Klinikáinak és Kórházinak Szövetsége, 4.sz. kiadvány, 1942.) 6.

[360] This column is the sum of different types of institutions: ophthalmic hospital, mental and neurologist hospitals, tuberculosis sanatorium, climatic health resorts, school sanatoriums, midwife training institutions, maternity homes, mother and infant care institutions, children-asylums, spas, detoxication centers and institutions for incurable diseases.

Table 9 – The Health Care Staff in Hungary (1906-1940) (given in %)

	Physicians and surgeons	Midwives	Pharmacists	Coroners
1906-1910	29.5	69.2	-	-
1911-1915	29.9	74.1	-	-
1925	68.7	72.6	13.4	41.2
1927	79.2	70.9	13.9	41.8
1936	112.1	58.7	17.5	38.5
1938	116.9	56.2	17.4	38.3
1940	105.8	51.5	14.4	41.4

Source: *Magyar Statisztikai Evkonyv*, Új Folyam, volumes XVII, XXIX, XL, XLII, (Budapest, Az Atheneum Irodalmi es Nyomdai Reszvenytarsulat konyvnyomdaja, 1915, 1927, 1938, 1940.), pp. 65, 34, 41, 43.

Table 10 – The Regional Distribution of Health Care Staff in Hungary (in 1910 and 1930) (given in %)

County	Number of Medical Staff per 10 000 inhabitants				
	1910	1930			
	Total	Total	physician	pharmacist	midwife
Abaúj és Torna	14.5	14,8	3,9	2,1	8,8
Bács-Bodrog	11.0	12,1	4,6	1,9	5,6
BAJA tjv	20.4	25,4	15,0	4,7	5,7
Baranya	12.9	14,0	3,4	1,7	9,0
Békés	18.2	17,4	7,1	3,3	7,0
Bihar	11.8	14,6	4,1	2,4	8,1
Borsod	12.5	12,7	3,5	2,3	6,8
Gömör és Kishont	17.2				
BUDAPEST	37.1	49,0	37,0	7,6	4,5
Csanád	15.3	14,8	5,6	2,8	6,4
Arad	8.9	-	-	-	-
Torontál	11.2	-	-	-	-
Csongrád	12.6	15,3	6,0	3,4	5,9
DEBRECEN	25.6	29,1	16,2	6,3	6,6
Fejér	12.4	13,1	4,3	2,3	6,6
GYŐR	22.1	28,1	18,5	4,7	4,9
Győr	10.3	12,4	3,6	1,6	7,2
Moson	15.7	-	-	-	-
Pozsony	11.5	-	-	-	-
Hajdú	15.2	13,3	4,1	3,0	6,1
Heves	11.4	12,7	4,8	2,2	5,6
HÓDMEZŐVÁSÁRHELY	16.3	21,9	10,6	4,0	7,3
Jász-Nagykun-Szolnok	14.1	15,1	5,7	3,2	6,1
KECSKEMÉT	14.0	15,2	6,7	3,4	5,2
Komárom	10.6	14,5	5,5	2,5	6,5
Esztergom	11.8	-	-	-	-
KOMÁROM-ÚJVÁROS	18.4	-	-	-	-
MISKOLC	26.8	29,4	17,9	5,8	5,7
Nógrád	13.8	14,7	4,9	1,9	7,9
Hont	14.4	-	-	-	-
PÉCS	22.7	34,5	23,8	5,2	5,5
Pest-Pilis-Solt-Kiskun	12.6	14,3	6,1	3,0	5,2
Somogy	13.0	15,0	5,1	2,2	7,7
Sopron	12.9	11,8	3,3	1,8	6,6
SOPRON	18.0	21,7	13,7	4,2	3,9
Szabolcs	13.2	13,3	4,8	2,3	6,2
Ung	13.8	-	-	-	-
Szatmár	11.1	11,8	3,1	2,1	6,6
Ugocsa	10.9	-	-	-	-
Bereg	11.0	-	-	-	-
SZEGED	16.7	22,2	12,0	4,1	6,1
SZÉKESFEHÉRVÁR	19.4	23,1	13,3	4,4	5,4
Tolna	12.6	15,5	5,8	2,1	7,5
Vas	11.2	14,8	6,2	2,0	6,7
Veszprém	13.5	15,2	4,8	2,5	7,8

Zala	9.9	13,0	4,2	1,6	7,2
Zemplén	12.8	14,8	5,9	2,7	6,2
Hungary	**13.7**	**19,1**	**9,5**	**3,2**	**6,3**

Source: *Az 1930.évi népszámlálás*, IV.rész, A népesség foglalkozása a főbb demográfiai adatokkal egybevetve (The 1930 census. Part IV, Profession Data of the Population with Respect to the Main Demographic Data), (Budapest, KSH, Stephaneum Nyomda Rt, 1936), 147-150.

Table 11 – Territorial distribution of beds in hospitals in 1940 (number of beds/100 hundred inhabitants)

Territory	number of beds/100 hundred inhabitants
Budapest and its neighborhood	1 029
Mid-Hungary (between the Danube and Tisza)	343
Right bank of the Danube	346
Left bank of the Danube	261
Right bank of the Tisza	380
Left bank of the Tisza	393
Sub-Carpathia	239
North-Transylvania	261
Territory of the Székelys	160
National average	**425**

Source: Kornél Scholtz, *Magyarország kórházai és más gyógyintézetei az 1940. évben* (Hungarian Hospitals and Other Health Care Institutions), (Budapest: Magyarország Klinikáinak és Kórházinak Szövetsége, 4.sz. kiadvány, 1942.) 21.

Table 12 – The Activities of the *Stefánia* Association in Budapest between 1922-1926

Activities	Number of cases				
	1922	**1923**	**1924**	**1925**	**1926**
1. Central health visitor office					
1.1 Give advice	15 216	11 012	10 813	13 995	7 217
1.2 Find place for mother and infant	792	352	255	262	48
1.3 Give infant clothes	450	552	352	566	2 764
1.4 Give artificial infant nurture	18	64	12	-	-
1.5 Find flat for mother with infant	76	17	56	49	-
1.6 Deal with illegitimate infant	-	3 566	3 422	3 589	3 058
1.7 Give allowance to mothers	489	282	117	516	707
1.8 Give legal advice	-	-	112	144	170
2. Central pantry					
2.1 Nurtured infants	279	223	294	475	388
2.2 Given milk dose	175 245	124 443	116 105	270 095	68 261
3. Certificates for health visitors					
3.1 18-20 years of age	1	5	7	6	8
3.2 21-35 years of age	13	14	16	20	27
3.3 31-35 years of age	3	2	6	7	1
3.4 36-40 years of age	4	2	1	5	4
3.5 41-45 years of age	6	1	2	2	5
3.6 45- years of age	1	1	1	-	-
3.7 Total	28	25	33	40	45
4. Activities of the gróf Apponyi Albert Mother Care Institution					
4.1 Give shelter for homeless mothers	162	258	20	242	168
4.2 Placed mothers in..					
4.2.1 housework job	65	72	56	32	25
4.2.2 hospital	3	18	8	35	22
4.2.3 in orphan asylum	3	-	2	12	7
4.2.4 pre-maternity center	12	63	57	69	42
4.3 days of nursing	4 450	7 119	7 583	8 700	9 810
5.Mother care					
5.1 Nurtured pregnant women	5 737	3 935	2 621	2 926	15 858
5.2 Advice for pregnant women	10 058	6 887	5 913	4 508	20 563
5.3 Pregnant women sent to pre-maternity centre	1 697	1 790	1 318	1 139	3 892
6. Infant care					
6.1 Number of nurtured infants	14 003	14 212	13 711	15 279	59 883
7. Social work					
7.1 visits by pregnant women	79 391	112 844	114 404	149 268	27 100
7.2 given clothes	4 481	448	273	316	-
7.3 given food	5 155	6 164	3 680	5 088	-
7.4 given other donation	1 419	616	1 908	1 020	2 141
7.5 give help in social cases	993	1 319	1 696	1 916	16 504

Source: Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XVI, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1927.) 997.

Table 13 – The Activities of the Stefánia Association in Budapest in 1930 and 1935

Activities	Number of cases	
	1930	**1935**
1. Members of the Association		
1.1 leading health visitor	25	24
1.2 district-health visitors	96	93
1.3 student health visitors	11	73
1.4 paediatrician	-	23
1.5 obstetrician	-	22
2. Mother care		
2.1 nurtured pregnant women	6 701	7 012
2.2 nurtured confined women	11 284	9 634
2.3 pregnant women sent to hospital	1 457	1 813
3. Infant care		
3.1 infants shown to doctor	61 592	62 694
3.2 infants nurtured	15 178	12 624
4. Social work		
4.1 visits by..		
4.1.1 pregnant women	15 738	19 961
4.1.2 confined women	13 465	10 350
4.1.3 infant	81 863	119 833
4.1.4 control	12 412	3 547
4.1.5 total	196 561	220 123
4.2 donation		
4.2.1 clothes	278	1223
4.2.2 food for mothers	6 492	69 626
4.2.3 food for infants	4 606	95 555
4.2.4 fuel	951	508
4.2.5 talcum powder	3 244	3 862
4.3 help in social cases	5 604	11 120
5. Central pantry		
5.1 given milk dose	84 410	112 837
6. Activities of the gróf Apponyi Albert Mother Care Institution		
6.1 nurtured mothers	18	19
7. Nurseries and day-care centres		
7.1 nurtured infants	728	962
7.2 nurtured children	565	765

Source: Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve*. (Statistic and Administrative Yearbook of Budapest), Vol. XX and Vol. XXV, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1931, 1936.), pp. 604, 587.

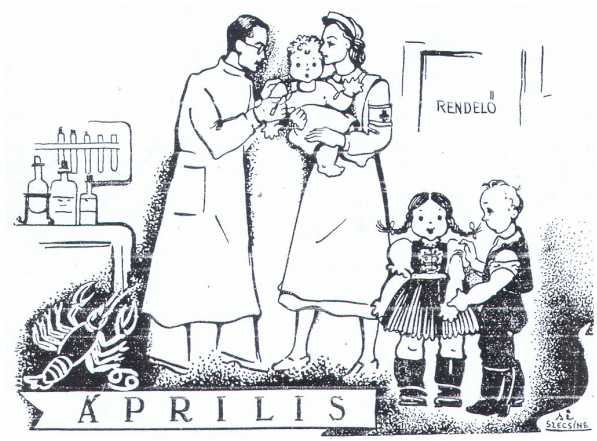
Figure 1 – Publication of the Stefánia Association

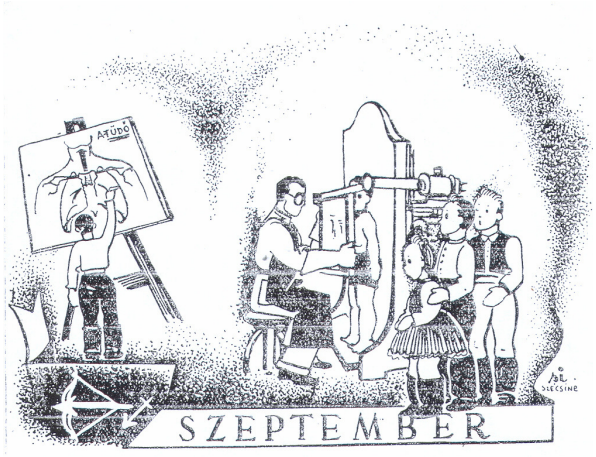
Source: Semmelweis Orvostörténeti Levéltár (Semmelweis Medical Archive).

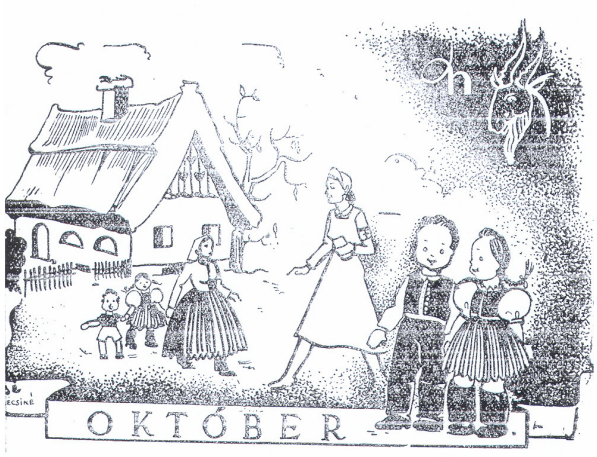
Figure 2 – Publication of the *Zöldkeresztes* Movement

Source: Semmelweis Orvostörténeti Levéltár (Semmelweis Medical Archive).

Figure 3 – Propaganda Posters published by the *Zöldkeresztes* Movement







Source: *Zöldkeresztes Kalendárium* 1942, 1943, 1944.
Budapest: Országos Egészségvédelmi Szövetség, 1942-1944.

Table 14 – Infant Mortality Rate according to Professions in the Middle Class (1927-1931) (given in %)

	Legitimate					Illegitimate				
	1927	**1928**	**1929**	**1930**	**1931**	**1927**	**1928**	**1929**	**1930**	**1931**
1. Landowners and agricultural officers	7.8	4.3	4.7	1.7	4.1	-	-	-	-	-
2. Self-employed and assistants in agriculture	10.3	11.2	15	10.9	8.8	26.7	30.8	40	4.8	-
3. Self-employed in mining and industry	7.7	9	6.1	6.5	7	-	75	31.6	33.3	20
4. Officers in mining and industry	3.4	4.6	5.5	6	4.9	-	-	-	-	-
5. Assistants in mining and industry	10.5	8.6	10.9	9.5	-	29	20.7	27.6	21.2	-
6. Self-employed in trade	7.4	6.7	7.2	5	6.4	53.8	3.3	18.2	61.5	42.9
7 Officers in trade	4.3	4.9	5.8	4.8	6	11.8	23.1	15.9	16.2	23.7
8. Assistants in trade	7.5	9.8	7.7	7.1	8.1	10	21.1	20.9	21.6	18.2
9. Self-employed ad officers in transport	7.2	8.3	7.2	5.5	7.5	-	-	-	33.3	-
10. Assistants in transport	13.8	12	13	9.3	21.1	-	-	62.5	44.4	-
11. Self-employed and officers in public service	5.3	4	4.9	3.4	3.9	11.1	39.1	17.6	20	16.7
12. Assistants in public service	10.3	10.7	8.5	7.5	-	50	28.6	-	-	-
13. Day-laborers	12.1	13.6	12.6	11.9	-	34.2	28.2	28.7	26.3	-
14. Domestic servants	0.8	1.7	0.7	0.5	-	22.3	21.1	16	15.4	-
Average	**7.7**	**7.8**	**7.8**	**6.4**	**7.8**	**27.6**	**29.1**	**27.9**	**27.1**	**24.3**

Source: Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai* (Social and Economic Circumstances of the bourgeois population in Budapest) (Budapest: Budapest Székesfőváros Statisztikai Hivatala 1935.), 79-81, 146. Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XV-XVIII, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1928-1931.), passim.

Table 15 – Infant Mortality Rate according to Professions in the Working Class (1928-1929) (given in %)

	Legitimate		Illegitimate	
	1928	**1929**	**1928**	**1929**
1.Manor servants	5.2	27.2	-	-
2. Aricultural workers	7.9	14.9	37.5	22.2
3. Gardener assistants	1.9	26.9	-	-
4. Forestry workers	-	-	-	-
5. Other primary product workers	50	-	-	-
6. Mining and metallurgy assistants	22.2	20	-	-
7. Joiner, carpenter and wheelsmith assistants	6.9	14.3	-	50
8. Barber and hairdresser assistants	6.7	13.9	-	66.7
9. Shoe and boot-maker assistants	9.5	13.1	25	28.6
10. Hostler and restaurant assistant crew	11.5	10.7	-	9.9
11. Blacksmith and locksmith assistants	8.4	10.4	28.5	83.3
12. Brick-mason assistants	11	16.4	-	100
13. Typographer and litographer assistants	7.7	10.2	-	20
14. Butcher assistants	6.6	18.6	-	-
15. Miller assistants	25	18.5	-	-
16. Baker assistants	7.5	14.6	-	-
17. Tailor assistants	10.2	13.5	12.3	22.5
18. Furrier assistants	-	12.5	-	-
19 Weaver assistants	8.3	.3	25.9	16
20. Other industrial assistants	10.3	11.5	24.2	33.1
21. Day-laborers	18.5	17.2	28.2	28.7
22. Domestic servants	56.5	34.8	21.1	16.1
23. Average	**10.4**	**13**	**22.2**	**21.1**

Source: Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten* (The social and economic conditions of the working class in Budapest), (Budapest: Budapest Székesfőváros Statisztikai Hivatala, 1930.), pp. 91, 128-129.

Table 16 – Infant Mortality Rate according to Religion in Hungary (1921-1943)

Year	Roman Catholic	Greek Catholic	Calvinist	Lutheran	Greek Orthodox	Unitarian	Jews	Unknown and others	Baptist	Total
1921	17.7	16.2	16.5	15.4	16.3	14.9	8.9	22.9	-	16.0
1922	17.9	16.7	9.5	12.8	20.5	22.4	8.5	58.3	-	16.8
1923	18.7	18.7	16.5	14.8	17.0	12.7	7.0	30.4	-	16.6
1924	17.2	21.1	22.4	14.2	17.0	10.6	6.4	26.9	-	15.4
1925	13.7	9.0	4.2	11.9	13.1	14.0	6.1	22.5	-	12.4
1926	12.4	11.4	3.6	10.7	12.1	7.5	5.8	25.5	-	11.4
1927	14.0	10.1	12.8	12.7	13.0	4.3	7.6	22.0	-	13.0
1928	13.3	10.9	12.3	10.2	11.9	8.8	5.4	28.8	-	12.0
1929	15.0	12.0	18.4	11.7	12.4	9.7	6.9	54.0	-	13.6
1930	12.1	6.5	1.9	8.9	13.4	9.1	6.3	23.9	-	11.4
1931	13.4	11.6	20.0	10.3	14.2	9.4	6.3	78.7	-	12.8
1932	17.2	12.8	17.8	14.6	17.0	8.6	8.4	34.7	-	16.1
1933	12.7	8.4	12.5	10.1	12.3	11.1	5.7	116.7	-	11.9
1934	12.2	7.8	2.9	10.5	12.1	0.0	6.4	37.9	-	11.5
1935	12.8	7.4	29.0	10.3	13.0	3.7	6.4	27.8	9.5	12.0
1936	11.0	9.2	7.1	7.0	10.7	6.3	5.1	75.0	13.0	10.2
1937	12.0	11.5	8.3	9.6	11.4	15.4	5.7	105.0	10.0	11.2
1938	8.9	7.0	8.7	6.4	9.5	7.4	5.3	65.2	9.5	8.6
1939	9.3	4.9	11.9	8.5	8.5	8.8	7.0	83.3	0.0	9.0
1940	10.7	7.6	7.5	9.0	10.7	0.0	7.0	110.0	16.1	10.4
1941	9.4	13.4	20.0	7.8	10.3	6.8	8.1	29.4	25.0	9.5
1942	11.9	8.5	10.0	7.0	12.5	10.7	7.2	10.0	0.0	11.3
1943	9.4	6.7	15.6	7.6	9.8	4.1	8.6	107.7	10.0	9.4

Magyar Statisztikai Évkönyv, Új Folyam, volumes XXVII-XLIX, (Budapest, Az Atheneum Irodalmi és Nyomdai Részvénytársulat könyvnyomdája, 1925-1943.), passim.

Table 17 – Infant Mortality Rate according to Religion in Budapest (1919-1942) (given in %)

Year	Roman Catholic	Greek Catholic	Calvinist	Lutheran	Greek Orthodox	Unitarian	Jews	Baptist	Unknown and others	Total
1919	16.4	18.1	16.0	14.2	17.9	18.1	12.4	11.6	3.9	**15.9**
1920	20.0	21.7	18.2	16.9	21.3	14.3	12.1	11.6	38.4	**19.3**
1921	19.8	19.9	19.1	17.2	21.2	13.3	12.1	15.3	20.0	**19.3**
1922	20.2	20.9	20.0	18.3	22.5	20.7	11.5	13.1	50.5	**19.8**
1923	19.0	19.0	17.9	16.2	20.4	12.1	11.0	17.3	41.8	**18.4**
1924	19.8	20.9	19.3	17.6	21.0	11.5	10.1	16.3	46.0	**19.3**
1925	17.0	18.7	17.3	14.9	19.7	10.0	9.4	19.6	30.5	**16.8**
1926	17.0	20.3	16.8	14.2	20.7	9.2	9.8	16.4	32.6	**16.7**
1927	18.7	21.7	18.5	17.3	22.7	4.6	10.5	15.8	21.8	**18.5**
1928	17.9	19.9	18.0	15.8	19.5	7.9	9.4	18.3	36.7	**17.7**
1929	18.2	19.6	18.2	16.1	20.8	11.4	10.6	20.4	35.9	**17.9**
1930	15.4	18.5	15.3	14.0	18.8	13.2	8.6	10.1	24.3	**15.2**
1931	16.2	19.8	16.6	15.0	19.4	14.6	8.9	13.7		**16.2**
1932	18.5	19.0	18.9	17.5	21.6	12.5	10.6	18.8	27.0	**18.4**
1933	13.9	14.7	13.4	12.6	15.6	8.1	7.6	11.6	50.5	**13.6**
1934	14.9	16.9	14.9	14.1	18.2	5.9	8.5	15.0	34.8	**14.8**
1935	15.1	16.7	16.0	14.4	22.6	14.1	7.8	15.1	22.6	**15.2**
1936	13.9	16.6	14.5	12.2	16.6	7.7	7.2	12.8	33.7	**13.9**
1937	13.5	15.8	13.5	11.8	16.8	12.7	6.6	13.4	46.5	**13.4**
1938	13.2	15.5	13.3	12.4	19.3	8.3	7.1	12.9	41.2	**13.1**
1939	12.1	16.8	12.3	10.9	15.0	9.1	9.2	13.9	48.0	**12.2**
1940	13.1	16.9	13.0	11.7	17.5	4.5	9.8	11.1	31.1	**13.4**
1941	12.0	16.9	12.0	9.4	15.2	11.3	9.9	11.5	66.3	**12.8**
1942	14.1	20.2	13.6	11.3	20.8	11.3	10.1	13.1	49.3	**14.9**

Source: Lajos Illyefalvi, *Budapesti Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XIII-XXXI, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1925-1942.), passim.

Table 18 – Infant Mortality Rate according to Religion and Social Layer in Budapest (1929, 1931) (given in %)

	Roman Catholic	Greek Catholic	Greek Orthodox	Lutheran	Calvinist	Unitarian	Jews	Unknown	Total
Working class (1929)									
Number of died infants	913	12	5	53	156	0	31	11	1181
Number of live-born	5779	101	18	340	1253	12	365	40	7908
Infant mortality rate (%)	**15.8**	**11.9**	**27.8**	**15.6**	**12.5**	**0**	**8.5**	**27.5**	**14.9**
Middle class (1931)									
Number of died infants	194	2	1	14	37	1	62	0	311
Number of live-born	13 421	203	70	1283	2722	67	7347	91	25204
Infant mortality rate (%)	**1.45**	**0.99**	**1.43**	**1.09**	**1.36**	**1.49**	**0.84**	**0**	**1.23**

Source: Lajos Illyefalvi, *A munkások szociális és gazdasági viszonyai Budapesten* (The social and economic conditions of the working class in Budapest), (Budapest: Budapest Székesfőváros Statisztikai Hivatala, 1930.), pp. 86-87, 126. Lajos Illyefalvi, *A főváros polgári népességének szociális és gazdasági viszonyai* (Social and Economic Circumstances of the bourgeois population in Budapest), (Budapest: Budapest Székesfőváros Statisztikai Hivatala 1935.), 79, 146.

Table 19 – Infant Mortality Rate according to Illegitimacy in Budapest (1921-1940) (given in %)

Year	Rate of illegitimate infants compared to total infant death	Rate of illegitimate infants compared to total live-born	Rate of illegitimate infant death per illegitimate live-born
1921	35.9	18.6	31
1922	39.4	18.8	35.2
1923	39.7	19.4	34.1
1924	39.4	19.1	31.8
1925	40.3	19.7	25.4
1926	36.5	19.9	21.0
1927	35.4	19.2	23.9
1928	31.7	19.2	19.9
1929	37.9	20.1	25.7
1930	33.9	19.5	19.8
1931	35.9	19.8	23.1
1932	34.5	19.6	28.3
1933	34.4	19.9	20.5
1934	31.7	18.7	19.5
1935	31.0	16.9	22.1
1936	30.7	15.7	19.9
1937	27.7	14.8	20.9
1938	22.9	14.8	13.3
1939	23.9	15.4	14.0
1940	26.6	15.2	18.2
1941	17.6	14.8	162
Average	**32.7**	**18.1**	**23.1**

Source: Lajos Illyefalvi, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol.XIII-XXX, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1925-1942), passim.

Table 20 – Number of Flats with Illegitimate Couples (1920 and 1925)

Number of rooms	1920	1925
Only kitchen	28	39
1 room	1869	2012
2 rooms	535	290
3	174	112
4	46	19
5	36	6
6	14	2
7	2	1
8	1	-
more than 8 rooms	5	-
Total	2710	2481

Source: Illyefalvi Lajos, *Budapest Székesfőváros Statisztikai és Közigazgatási Évkönyve* (Statistic and Administrative Yearbook of Budapest), Vol. XIV, (Budapest Székesfőváros Statisztikai Hivatalának kiadása, 1926.) 26.

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